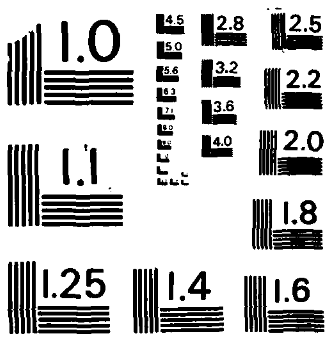
AD-A175 337 THE NATURE OF AIRBORNE PARTICULATES AT TROPIC EXPOSURE SITES(U) ARMY TROPIC TEST CENTER APO MIAMI 34004 F CHEN ET AL. SEP 84 USATTC-840903 1/1

UNCLASSIFIED F/G 4/1 NL



MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

AD NO.
TECOM PROJECT NO. 7-CO-IL4-TTI-001
USATTC REPORT NO. 840903

AD-A175 337

FINAL REPORT

OF

THE NATURE OF AIRBORNE PARTICULATES AT TROPIC EXPOSURE SITES

DR. FREDDY CHEN

DR. WILLIAM A. DEMENT

Materiel Test Division

UNITED STATES ARMY TROPIC TEST CENTER

APO MIAMI 34004

SEPTEMBER 1984

Period Covered:
November 1982 to September 1984.
Prepared For:
US Army Test and Evaluation Command, ATTN: AMSTE-AD-M, Aberdeen Proving Ground, MD 21005

Disposition Instructions

Destroy this report when no longer needed. Do not return to the originator.

Disclaimer

The views, opinions, and findings in this report are those of the authors and should not be construed as an official Department of the Army position, unless so designated by other official documentation.

Trade Names Statement

The use of trade names in this report does not constitute an official endorsement or approval of the use of such commercial hardware or software. This report may not be cited for purposes of advertisement.

Neutral Language Statement

The word "he," when used in this report, represents both the masculine and feminine genders, unless otherwise specifically stated.

REPORT DOCUMENTATION PAGE

READ INSTRUCTIONS BEFORE COMPLETING FORM

1. REPORT NUMBER: TECOM Project No. 7-CO-IL4-TT1-001	2. GOVT ACCESSION NO.
3. RECIPIENT'S CATALOG NUMBER	
4. TITLE (and Subtitle): The Nature of Airborne Particulates at Tropic Exposure Sites	5. TYPE OF REPORT & PERIOD COVERED: In-House Laboratory Independent Research Final Report-Nov 82 to Sep 84
	6. PERFORMING ORG. REPORT NUMBER: USATTC Report No. 840903
7. AUTHOR(s): Dr. Freddy Chen Dr. William A. Dement	8. CONTRACT OR GRANT NUMBER(s)
9. PERFORMING ORGANIZATION NAME AND ADDRESS: US Army Tropic Test Center ATTN: STETC-MTD-P APO Miami 34004	10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS
11. CONTROLLING OFFICE NAME AND ADDRESS: US Army Test and Evaluation Command ATTN: AMSTE-AD-M Aberdeen Proving Ground, MD 21005	12. REPORT DATE: September 1984
	13. NUMBER OF PAGES: 48
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office): US Army Test and Evaluation Command ATTN: AMSTE-AD-M Aberdeen Proving Ground, MD 21005	15. SECURITY CLASS. (of this report): Unclassified
	15a. DECLASSIFICATION/DOWNGRADING SCHEDULE

16. DISTRIBUTION STATEMENT (of this Report)

Approved for public release, distribution unlimited.

17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)

18. SUPPLEMENTARY NOTES

19. KEY WORDS (Continue on reverse side if necessary and identify by block number)

Airborne Particulates
Panama
Tropical Region
Air Samplers
Scanning Electron Microscopy
X-ray Spectroscopy (EDX)
Silicates
Sulfur
Phosphorus
Chlorides
Fungus

20. ABSTRACT (Continue on reverse side if necessary and identify by block number)

Airborne particulates were collected at five exposure sites in Panama using cascade impactor air samplers. Scanning electron microscopy, energy dispersive x-ray analysis, and culture identification techniques were used to analyze the particulates. Analysis revealed that the particulates consist of silicates, chlorides, and sulfur-rich and phosphorus-rich particles. Atmospheric particle levels were higher in the dry season than in the rainy season, and the predominant fungal species varied at each exposure site. The

Block 20 (concluded)

open direct exposure of culture plates served as a simple, appropriate method for monitoring atmospheric fungal spores.

TABLE OF CONTENTS

APPENDIXES

THE NATURE OF AIRBORNE PARTICULATES AT TROPIC EXPOSURE SITES

1. BACKGROUND

a. Microbial deterioration of natural polymers is a major material problem in the humid tropics. However, the role of microorganisms in the deterioration of many synthetic polymers is unclear. Polymers which are not broken down directly by microorganisms may be affected adversely by the microbial products of surface contaminant metabolism. The presence of such surface contaminants may be a primary distinguishing factor between natural environment and chamber testing. Little information is available on the nature and source of surface contaminants and their contribution to tropic materiel degradation.

b. The US Army Tropic Test Center (USATTC) first studied surface deposits, their sources, and their roles in microbiological deterioration of materials in the 1960's (reference 1). This effort centered on volatile organic materials produced by vegetation and associated microflora as the source of the organic surface deposits. These volatile organic molecules, it was hypothesized, were present in the atmosphere under the canopy in concentrations high enough that they would either condense on exposed surfaces or be used directly from the air by fungi. Much of this work was theoretical and based largely on laboratory studies.

c. A subsequent USATTC methodology investigation, TECOM Project No. 9-CO-049-000-002 (reference 2), inventoried volatile and condensed organic materials at seven sites in the Panama Canal Area. USATTC found that the volatile organic components of the air were primarily fossil fuel combustion products in low concentrations (comparable to levels in unpolluted temperate areas). USATTC did not find any volatile effluents from vegetation. USATTC traced some components of condensed materials to local vegetation sources, but the mode of transfer was not determined because the components were not volatile. These condensed materials supported fungal growth.

d. Past studies have concentrated on volatile atmospheric organics as the source of surface contaminants. Results from USATTC's second study (reference 2) suggest that the source may be atmospheric particulates rather than volatiles. This investigation focused on the nature of atmospheric particulates at USATTC test sites.

2. OBJECTIVE

Determine the nature of airborne particulates at various USATTC exposure sites and determine whether these particulates differ between the rainy and dry seasons.

3. PROCEDURES

a. Particulate Sample Collection

(1) USATTC collected airborne particulates using Misco-Sierra High

Volume Air Samplers with constant air flow controller attachments. The air flow controllers were set at a constant flow of 40 cubic feet per minute (CFM) ($1.9 \times 10^{-2} m^3/sec$). A 5-stage collector (High Volume Cascade Impactor) separated the collected particles according to size. The manufacturer provided particle size cut-off values for each stage at 50-percent collection efficiency for spherical particles at 25° C and 1 atm. pressure:

Stage No.	Mass Median Diameter (microns) at 40 CFM
1	to 7.2
2	7.2 to 3.0
3	3.0 to 1.5
4	1.5 to 0.95
5	0.95 to 0.49
High Volume Standard Filters (6)	0.49 to 0.00 (remaining particles)

(2) USATTC used both cellulose and fiberglass filters during this study. The filters were weighed before and after sampling, and the weight gain noted when the two weights were compared is considered to be the weight of the particles collected. Before each weighing, the filter papers were conditioned to laboratory humidity for at least 24 hours.

(3) A detailed sampling schedule is presented in Appendix A, table 1. Sampling times at the exposure sites were normally 24 hours, but sampling periods of less or more than 24 hours were used occasionally. The variable sampling intervals were used to determine whether or not overloading occurred during the regular 24-hour sampling periods. USATTC checked for the possibility of daytime and nighttime sampling result differences by changing filters during a 24-hour period and comparing the results.

(4) The exposure sites used for testing were the Fort Sherman Coastal Exposure Site (FSCES), Fort Sherman Open Exposure Site, MacKenzie Forest Exposure Site (MFES), Fort Clayton General Purpose Test Area (FCGPTA), and the Rodman Munition Surveillance Site (RMSS). Because electrical power outlets for the air samplers were not available at RMSS, limited sampling was done there. Most sampling was done at the FCGPTA because it is near USATTC's main installations. To determine if there are seasonal differences in atmospheric particulates, air sampling was carried out during both the rainy and dry seasons.

b. Microscopic and Energy Dispersive X-ray (EDX) Analysis of Particulates.

(1) An International Scientific Instrument Super II Scanning Electron Microscope (SEM) was used to perform the microscopic and EDX analysis. The SEM operates by focusing a high voltage electron beam on the sample, generating a secondary electron (SE) emission which is picked-up by a SE detector. The SE detector gives details of the sample's surface morphology. Simultaneously, x-rays are emitted by the surface constituents of the sample which are detected by a Si-Li drifted detector. By means of an EDX analysis, the elemental composition of the sample surface is then obtained. A Si-Li detector can detect only the x-rays from elements with an atomic number higher than 10 (i.e., sodium and higher).

(2) Three sections of about 0.8 cm^2 were cut from each filter paper and mounted on carbon SEM stubs with an isopropyl alcohol-base graphite glue. The samples from the high volume standard filter were randomly selected. The samples to be analyzed and a blank sample from an unexposed filter were sputter-coated together with gold and graphite. The x-ray spectrum of the blank sample was used for background correction in the analysis of the air filters' EDX spectrum.

(3) The sample was examined with the SEM at a low magnification (usually 100x) and an area representative of the sample was selected. An EDX analysis of this area was performed. The surface coverage of the area was about $5x10^5$ μm^2. To determine whether or not the particulate composition of this area was homogeneous, a second EDX analysis was performed on a partial section of the analyzed area. The surface coverage of the smaller section was about $1x10^4$ μm^2. Normally, a third EDX analysis was performed on an equally small section located elsewhere in the analyzed area. Many more EDX analyses were required when the sample was heterogeneous or contained many large particles (with diameters greater than 5 µm). The SEM spot mode was useful for the EDX analysis of large particles. This mode allowed the collection of x-rays from a selected spot on the particle surface, thus avoiding the collection of extraneous x-rays from the surrounding particle. The acquisition time for an EDX analysis was generally set for 100 seconds.

(4) At the latter stages of the test, a Robinson Back-scattered Electron (BSE) detector was used instead of the SE detector. The BSE detector allowed samples to be used without a gold coating. In the absence of the gold peak, the new normalization peak was a section of the spectrum 50 eV wide and centered at 350 KeV. This is a region where no M, L, or K x-ray peaks are found.

c. Microbiological Assay

(1) Portions (0.5 cm^2) of the filter papers containing particulate samples were cut and placed in carrot-agar culture plates that were left standing at room temperature (75° F/24° C) for several days. The fungi that grew in the culture media were either identified or described when identification was not possible. As a control for the microbiological assays, portions of unexposed filter papers were placed on culture plates and incubated with the exposed samples.

(2) A second procedure, a membrane test, was used to collect particulates for microbiological assay and its results were compared to those obtained using the filter papers. This procedure is described in detail in Test Operations Procedure (TOP) 8-2-514 (reference 3) and was used mainly at FCGPTA during the final test stages. During this procedure, air was pulled through a membrane filter of 0.47 μm pore size for five minutes. Air flow was set at 11.5 liters per minute ($1.9 \times 10^{-4} m^3/sec$). A sufficient number of organisms was collected, while avoiding overcrowding on the membrane filter, in 5 minutes of sampling time (reference 3). The entire membrane filter was placed on carrot-agar medium in a petri dish, and the cultures were kept at room temperature (75° F/24° C) for several days. The fungi and bacteria that grew on the culture plates were either identified or described when identification was not possible. Unexposed membrane filters, which were placed on culture plates and incubated at the same time as the exposed membrane filters, served as controls for the microbiological assay.

(3) Carrot-agar culture plates were opened and exposed at the test sites. Generally, 1 to 2 minutes of exposure was sufficient to collect a variety of spores without overcrowding the plate. This collection method measured the amount of microorganisms deposited on surfaces at a given site. As controls, a similar number of culture plates were opened in the laboratory, an air-conditioned environment with limited particulate fall-out. This direct exposure test was done to compare the microorganisms collected by suction methods (air samplers and membranes) with those from a non-suction method (free-fall deposition).

4. RESULTS

a. Particle Collection

(1) The results for particle collection are listed in Appendix A, table 1. They are listed according to the Julian date on which the sample was collected.

(2) The particle collection weight results indicate that most particles were collected by the final filter and the second stage of the cascade impactor. Exceptions were samples collected at the FSCES, where the particles were collected largely by the first two stages of the cascade impactor.

(3) The Appendix A, table 1 results show that higher collection rates were obtained when cellulose filters were used. However, collection rates were much more variable than those obtained with fiberglass filters. In the two instances when filter papers were changed after a 6- or 8-hour operation, it was found that more particles (by weight) were collected at night than during the day. Collection rates were higher in the dry season than in the rainy season.

(4) The color of the collected particulates ranged from light brown to black.

b. Energy Dispersive X-Ray Results

(1) The EDX analysis results are listed in Appendix A, table 2. The particles were classified into four groups based on their main component. These groups were silicates, chlorides, sulfur-rich, and phosphorus-rich particles. The silicates were particles without definite form and size; they were found on all stages of the cascade impactor. Chloride particles were cubic, large, and found mainly in the first two stages of the cascade impactor. Sulfur-rich particles were spherical, small, and found mostly in the last three stages of the cascade impactor. The phosphorus-rich particles were found largely in the first two stages of the cascade impactor. These phosphorus-rich particles were found in filters sampled at the FCGPTA and the MFES.

(2) No significant differences in EDX results were observed for particles sampled during daytime when compared with those sampled at night. However, the levels of phosphorus detected were much higher for particle samples obtained during the rainy season than during the dry season.

(3) The nature of the samples was problematic during SEM examination. This problem was caused by the non-conductive nature of the filter paper and the fact that the particles were not firmly attached to the paper. Even when gold and graphite coatings were used, charging was significant. The sample's thermal expansion while under the electron beam caused particles to move and occasionally to become dislodged from the filter paper.

c. Fungal Analysis Results

(1) Appendix A, table 3 lists the fungi found from each stage. Appendix A, table 4 lists the fungi found using the membrane air sampling procedures and Appendix A, table 5 lists the fungi found in the culture plates after direct exposure. The different sampling methods provided basically similar results.

(2) The fungi identified and listed in Appendix A, tables 3 thru 5, include 11 of the 15 species found by Hutton, et al. (reference 4) in their 1968 study. The isolation and identification of every fungus species observed were not within the scope of this test. Fungi that could not be readily identified were labeled as "unknowns." A description of these unknown fungi is presented in Appendix B. The main difference in the results of Appendix A, tables 3, 4, and 5 is the number of times *Fusarium* was observed. *Fusarium* was observed much more often in the cultures from the high volume sampler and from those that were exposed directly, than in those prepared from membranes filters.

5. DISCUSSION

a. The air sampler results must be interpreted with care, especially those results relating to the weight of the particulates collected, because of the tropical atmosphere's high humidity. Hutton, et al. (reference 5) reported that samples from the first three stages had the tendency to become wet when using a four-stage cascade collector. He found that only the smallest particles were dry enough for analysis. Therefore, conditioning the collecting filters to the laboratory humidity is critical before weighing the filters.

b. More consistent collection rates were obtained with fiberglass filters than with cellulose filters. For this reason, fiberglass filters are preferable to the cellulose filters for humid tropic use. Although high collection rates were obtained sometimes using cellulose filters, they may result from the interaction of air moisture with the filter material and may not accurately reflect atmospheric particulate concentration.

c. Gauger, et al. (reference 6) also reported higher rates of particulate collection during the dry season than the rainy season. A number of environmental factors contribute to the higher atmospheric particulate content during the dry season. These factors include the following:

(1) Increase of trade winds, which can lift particulates into the air.

(2) The absence of rainfall, capable of washing away litter and debris from the ground, and of precipitating atmospheric particulates which could serve as condensation nuclei for the rain droplets.

(3) Extensive dry season forest and grassland fires which produce enough particulates to cause an atmospheric haze.

d. The exhaust from the air samplers was found to affect atmospheric particulates by disturbing and lifting up litter, dust and spores which could be picked up by the samplers. The air samplers collected copper metal chips at different exposure sites, including the laboratory. These copper chips appear to be originating from the air sampler itself, when copper is blown into the atmosphere through its exhaust. The sampler collected these chips which were suspended in the air by the force of the exhaust hitting the floor.

e. Many silicon-containing particulates of different sizes and without definite forms or shapes were collected at all exposure sites. Silicon, by weight, is the second most abundant element on the earth's crust. Combined with oxygen and other elements, it forms an enormous diversity of silicate minerals. Silicon is the main component of sands and clays.

f. Also, many chloride particulates were collected at all exposure sites, especially at the FSCES. In general, these were the largest particulates collected, had a cubic shape, and were water soluble. The marine environment surrounding the 56-mile-wide Isthmus of Panama is the source of the chloride salts.

g. The sulfur-rich particulates were found at all exposure sites. These were spherical and smaller than the chloride particulates and were found mainly in the last three stages of the cascade collector. Several analyses of the detected sulfur-rich particulates were done. Our EDX analysis results indicated only the presence of sulfur. Further EDX analyses were done with windowless Si-Li detectors during the advanced SEM course at Lehigh University, Allentown, Pennsylvania. These EDX analyses showed only the presence of carbon, oxygen, and sulfur. However, the cellulose filter could be the source of the carbon and oxygen signals. The absence of nitrogen in the windowless EDX results rules out the possibility of the particulates being ammonium sulfate. Ammonium sulfate has been reported by Junge (reference 7) as the form by which aerosol sulfur would travel. The particulates were insoluble in water and in carbon disulfide, and tests for sulfates using dilute barium chloride yielded negative results. These test results suggest that our sulfur-rich particulates are small particulates of silicon or carbon absorbed with sulfur, and not sulfuric acid droplets or pure elemental sulfur. This suggestion is further supported by the facts that silicon is found on all stages and that sulfur could use it as a transport media. Carbon-bound (organic) sulfur is produced by the decomposition of organic mercaptans. The binding that occurs between sulfur and carbon/silicon can be hypothesized as electrostatic. Its surface charge would make it insoluble in carbon disulfide.

h. The phosphorus-rich particulates were without any definite structural or geometrical form and were found mostly on samples from the FCGPTA and MFES sites. This is not surprising, since both sites are basically under canopy, and biological activity is higher in forested sites than in open sites (reference 8). The higher biological activity during the rainy season can also explain the higher levels of phosphorus detected at these sites during the rainy season. EDX analysis using the external window mapping mode showed the phosphorus to be associated with particles of biological origin. These particles include seeds, pollen, debris, leaves, litter, and spores.

i. The fungi identification results in Appendix A, tables 3 through 5, indicate that the sampling techniques used in this investigation provide basically similar results. More species of fungi were observed when culture plates underwent open exposure at the sites. Thus, the simple method of exposing culture plates is considered best for monitoring atmospheric fungal contaminants.

j. Test results indicate that atmospheric particulates contain a diversity of fungal species. Almost identical species of fungi were observed in culture plates prepared with particulates collected from the different cascade collection stages. This indicates that spores can travel and can be

found as individual spores, clusters, or attached to other particles. Individual spores may detach from the clusters, but are trapped by the subsequent filter stages.

6. CONCLUSION

a. Surface contaminants have been found to be both organic and inorganic in nature. The predominant organic particulates were fungal spores and phosphorus-rich particulates. Silicates, chlorides, and sulfur-rich particles were the main inorganic particulates. Silicates were found in all size ranges separated by the cascade impactor; chlorides generally had a diameter larger than 1.5 μm; and sulfur-particles had diameters usually between 0.5 μm and 3.0 μm.

b. Higher collection rates were obtained for dry season sampling than for rainy season sampling, and when sampling was done at night rather than during the day.

c. Precautions are needed to prevent the air sampler exhaust from causing unnaturally high levels of phosphoric particulates.

d. Fiberglass filters were found to be best suited for humid tropic sampling.

e. The simple method of open, direct exposure of culture plates was found to be the most appropriate method for collecting atmospheric fungal spores.

APPENDIX A. TABULATED TEST RESULTS

TABLE 1. INDIVIDUAL STAGE PARTICLE RESULTS, BY WEIGHT AND PERCENT

OBS	SITE	CJDATE	TIME (hr)	FILTER	CRATE (mg/hr)	WT1	WT2	WT3	WT4	WT5	WT6	WTOTAL	PC1	PC2	PC3	PC4	PC5	PC6
						(----------			mg			----------)	(----------		%			----------)
1	FCG	2064	7	F	12.1	56.24	9.76	0.58	13.09	0.62	4.46	84.75	66.40	11.50	0.70	15.40	0.70	5.3
2	FCG	2069	23	F	4.3	9.34	13.51	4.31	1.81	0.62	22.49	52.08	17.90	25.90	8.30	3.50	1.20	43.2
3	FCG	2068	23	F	5.4	11.03	23.09	14.34	6.91	50.46	19.10	124.93	8.80	18.50	11.50	5.50	40.40	15.3
4	FCG	2070	24	C	3.2	9.49	15.37	8.28	5.54	3.19	34.39	76.26	12.40	20.10	10.90	7.30	4.20	45.1
5	ROD	2076	3	F	22.8	11.26	16.80	5.45	2.22	0.36	32.29	68.38	16.50	24.60	7.80	3.30	0.60	47.2
6	MCK	2081	24	F	2.5	15.67	22.03	4.57	2.19	2.34	13.85	60.65	25.80	36.30	7.50	3.60	3.90	22.8
7	MCK	2082	24	C	2.6	10.09	19.87	4.96	4.13	3.18	18.97	61.20	16.50	32.50	8.10	6.70	5.20	31.0
8	MCK	2123	23	C	2.7	2.88	15.38	1.55	1.92	1.72	39.07	62.52	4.60	24.60	2.50	3.10	2.80	62.4
9	FCG	2126	21	C	13.7	45.24	53.64	41.05	35.76	28.33	84.06	288.08	15.70	18.60	14.30	12.40	9.80	29.2
10	ROD	2140	25	C	8.3	30.69	42.47	27.18	24.08	21.65	60.71	206.78	14.80	20.50	13.10	11.70	10.50	29.4
11	MCK1	2160	6	C	59.6	51.48	50.99	47.78	46.09	47.06	114.28	357.68	14.40	14.30	13.40	12.90	13.10	31.9
12	MCK2	2160	9	C	88.4	98.02	126.72	92.66	104.29	137.82	236.25	795.76	12.30	15.90	11.60	13.10	17.30	29.8
13	MCK3	2161	7	C	23.9	22.87	26.35	21.93	22.16	18.62	55.44	167.37	13.70	15.70	13.10	13.30	11.10	33.1
14	FCG1	2203	6	C	22.1	18.31	22.47	16.98	14.43	15.09	45.30	132.58	13.80	17.00	12.80	10.90	11.40	34.1
15	FCG2	2203	6	C	30.5	20.92	25.52	23.26	24.44	25.04	63.66	182.84	11.40	14.00	12.70	13.40	13.70	34.8
16	FCG3	2204	6	C	38.3	32.07	38.27	24.76	27.61	28.32	78.82	229.85	13.90	16.70	10.80	12.00	12.30	34.3
17	FCG4	2204	6	C	15.2	13.26	17.62	15.00	12.70	2.60	30.26	91.44	14.50	19.30	16.40	13.90	2.80	33.1
18	FSO	2207	96	C	2.1	32.00	55.17	17.24	16.71	9.71	68.86	199.69	16.00	27.60	8.60	8.40	4.90	34.5
19	FSC	2217	24	C	16.3	130.01	79.95	28.87	23.69	23.33	105.49	391.34	33.20	20.40	7.40	6.00	6.00	27.0
20	FSO	2217	23	C	13.5	45.45	48.70	30.11	26.53	28.15	130.49	309.43	14.70	15.70	9.70	8.60	9.10	42.2
21	FCG	2363	25	C	1.8	9.10	11.12	1.17	1.60	2.71	19.07	44.77	20.33	24.84	2.61	3.57	6.05	42.6
22	FSC	3018	25	F	2.1	16.97	21.11	7.08	0.89	1.79	4.70	52.54	32.29	40.18	13.48	1.69	3.41	8.9
23	FSO	3018	25	F	4.2	5.51	5.69	20.88	12.24	4.54	57.31	106.17	5.19	5.35	19.67	11.53	4.28	53.9
24	MCK	3025	22	F	5.1	9.82	45.57	28.16	14.62	4.81	10.23	113.21	8.67	40.25	24.87	12.92	4.25	9.0
25	FSC	3025	23	F	8.3	48.77	70.05	31.60	19.99	3.02	16.48	189.91	25.68	36.89	16.64	10.52	1.59	8.6
26	FSO	3038	24	F	7.5	69.43	54.56	14.32	6.92	2.05	33.70	180.98	38.37	30.15	7.91	3.82	1.13	18.6
27	MCK	3038	26	F	1.5	5.14	12.57	4.41	1.70	3.14	11.85	38.81	13.25	32.39	11.36	4.38	8.09	30.5
28	FCG	3041	25	F	1.8	7.55	11.71	3.67	1.24	1.75	19.95	45.87	16.46	25.53	8.00	2.70	3.82	43.4
29	FCG	3081	25	F	5.2	11.52	24.82	11.48	9.25	2.97	68.86	128.90	8.94	19.26	8.90	7.18	2.30	53.4
30	FCG	3087	24	F	22.0	9.76	13.92	5.10	3.27	3.41	18.06	53.52	18.24	26.01	9.53	6.11	6.37	33.7
31	FCG	3088	24	F	2.5	8.71	17.66	7.22	3.07	1.20	22.93	60.79	14.33	29.05	11.88	5.05	1.97	37.7
32	FCG	3095	24	F	2.8	7.34	16.27	7.09	4.01	3.74	27.85	66.30	11.07	24.54	10.70	6.05	5.64	42.0
33	FCG	3096	24	F	2.6	7.44	17.26	4.78	4.04	1.36	27.56	62.44	11.91	27.64	7.66	6.47	2.18	44.1
34	FCG	3097	24	F	3.7	10.21	16.93	7.25	5.88	5.64	42.38	88.29	11.56	19.18	8.21	6.66	6.39	48.0
35	FCG	3101	24	F	2.9	6.79	11.41	6.22	4.20	3.50	37.09	69.21	9.81	16.49	8.99	6.06	5.06	53.5
36	FCG	3102	23	F	2.5	5.62	10.54	3.51	2.53	1.74	33.22	57.16	9.83	18.44	6.14	4.43	3.04	58.1
37	FCG	3103	25	F	5.2	16.98	4.23	20.33	6.67	3.23	77.50	128.94	13.17	3.28	15.77	5.17	2.51	60.1
38	FCG	3104	24	F	3.4	9.43	15.29	5.45	5.83	4.17	42.29	82.46	11.44	18.54	6.61	7.07	5.05	51.2
39	FCG	3108	43	F	5.0	30.00	32.68	12.99	16.19	11.67	112.84	216.37	13.87	15.11	6.00	7.48	5.39	52.1
40	FCG	3110	24	F	4.7	14.74	18.69	7.43	5.47	6.24	59.70	112.27	13.13	16.64	6.62	4.87	5.56	53.1
41	FCG	3111	30	F	5.9	28.28	26.09	10.16	10.81	7.48	93.49	176.31	16.04	14.80	5.76	6.13	4.24	53.0
42	FCG	3115	26	F	1.4	1.70	12.18	3.96	1.72	1.23	15.90	36.69	4.63	33.20	10.79	4.69	3.35	43.3
43	FCG	3116	24	F	1.4	1.39	7.06	3.95	2.10	1.31	18.56	34.37	4.05	20.54	11.49	6.11	3.81	54.0
44	FCG	3117	25	F	1.5	1.33	11.11	2.76	1.01	1.08	20.86	38.15	3.49	29.12	7.23	2.65	2.83	54.6
45	FCG	3118	24	F	1.5	4.26	9.64	2.22	0.80	0.11	18.93	35.96	11.85	26.81	6.17	2.22	0.31	52.6
46	FCG	3124	24	F	1.5	3.48	10.90	4.73	2.72	0.13	12.89	34.85	9.99	31.28	13.57	7.80	0.37	36.9
47	FCG	3125	24	F	1.6	2.51	13.39	3.82	2.92	1.60	13.44	37.68	6.66	35.53	10.14	7.75	4.25	35.6

Table 1 (cont)

OBS	SITE	CJDATE	TIME (hr)	FILTER	CRATE (mg/hr)	WT1	WT2	WT3	WT4	WT5	WT6	WTOTAL	PC1	PC2	PC3	PC4	PC5	PC6
						(------	------	------	mg	------	------	------)	(------	------	------	%	------	------)
48	FCG	3130	23	F	1.8	6.77	12.73	4.66	1.85	2.06	13.45	41.52	16.31	30.66	11.22	4.46	4.96	32.3
49	FCG	3131	24	F	2.1	4.52	9.26	3.61	0.15	0.73	32.94	51.21	8.83	18.08	7.05	0.29	1.43	64.3
50	FCG	3132	25	F	2.1	6.24	13.45	7.43	3.58	1.53	19.72	51.95	12.01	25.89	14.30	6.89	2.95	37.9
51	FCG	3136	25	F	1.9	5.20	10.03	5.55	3.78	1.93	21.23	47.72	10.90	21.02	11.63	7.92	4.04	44.4
52	FCG	3137	24	F	1.0	1.89	6.66	1.61	1.59	1.38	11.76	24.89	7.59	26.77	6.46	6.39	5.54	47.2
53	FCG	3138	24	F	0.9	2.24	5.36	1.01	0.55	0.35	13.26	22.77	9.84	23.54	4.44	2.41	1.54	58.2
54	FCG	3139	23	F	1.4	2.33	10.71	0.64	1.36	1.45	16.70	33.19	7.02	32.27	1.93	4.10	4.37	50.3
55	FCG	3143	25	F	0.8	0.13	8.63	4.22	0.55	0.98	5.30	19.81	0.66	43.56	21.30	2.78	4.95	26.7
56	FCG	3144	47	F	1.2	7.36	22.67	9.56	4.33	0.69	13.68	58.29	12.63	38.89	16.40	7.43	1.18	23.4
57	FCG	3145	24	F	1.1	2.19	8.89	2.70	0.60	0.46	10.49	25.33	8.65	35.10	10.66	2.37	1.81	41.4
58	FCG	3151	24	F	1.1	0.37	8.20	0.52	1.32	0.94	15.39	26.74	1.38	30.67	1.94	4.94	3.52	57.5
59	FCG	3152	23	F	1.4	0.54	10.21	4.67	1.33	0.28	14.09	31.12	1.74	32.81	15.01	4.27	0.90	45.2
60	FCG	3153	23	F	1.2	1.28	8.77	1.36	0.42	0.64	14.51	26.98	4.74	32.51	5.04	1.56	2.37	53.7
61	FCG	3157	29	F	1.3	3.94	10.60	3.24	0.66	1.55	17.03	37.02	10.64	28.63	8.75	1.79	4.19	46.0
62	FCG	3158	24	F	1.1	2.82	6.30	1.84	0.73	0.02	14.60	26.31	10.72	23.95	6.99	2.77	0.08	55.4
63	FCG	3159	24	F	1.3	0.05	8.88	2.44	0.93	1.62	17.25	31.17	0.16	28.49	7.83	2.98	5.20	55.3
64	FCG	3160	22	F	1.4	2.73	8.76	3.02	1.06	0.03	14.44	30.04	9.09	29.16	10.05	3.53	0.10	48.0
65	FCG	3164	23	F	2.1	5.04	9.18	5.17	3.83	2.83	21.90	47.95	10.51	19.15	10.78	7.99	5.90	45.6
66	FCG	3165	24	F	0.9	-0.04	5.40	1.29	-0.15	-1.05	15.10	20.55	-0.20	26.28	6.28	-0.73	-5.11	73.4
67	FCG	3166	25	F	1.0	1.23	5.50	2.04	1.05	0.15	14.82	24.79	4.96	22.19	8.23	4.24	0.60	59.7
68	FCG	3167	24	F	1.1	3.39	6.89	2.87	0.38	-0.83	13.23	25.93	13.09	26.49	11.08	1.47	-3.21	51.0
69	FCG	3171	24	F	1.3	4.63	12.65	2.67	0.58	0.45	11.16	32.14	14.41	39.36	8.31	1.80	1.40	34.7
70	FCG	3172	24	F	1.2	3.21	9.25	2.12	1.48	1.18	12.07	29.31	10.95	31.56	7.23	5.05	4.03	41.1
71	FSO	3192	24	F	1.0	1.10	4.21	0.57	1.76	2.05	14.93	24.62	4.47	17.10	2.31	7.15	8.33	60.6
72	FSC	3192	25	F	2.3	24.80	13.60	2.04	2.35	2.06	13.46	58.31	42.53	23.32	3.50	4.03	3.53	23.0
73	MCK	3193	24	F	2.2	5.41	17.70	9.02	1.80	1.47	18.31	53.71	10.07	32.96	16.79	3.35	2.74	34.0
74	FCG	2064	7	F	1.7	.	.	.	.	.	11.80	.	.	.	.	.	.	100.0
75	FCG	2069	23	F	2.2	.	.	.	.	.	50.10	.	.	.	.	.	.	100.0
76	FCG	2068	23	C	3.5	.	.	.	.	.	81.56	.	.	.	.	.	.	100.0
77	FCG	2070	24	C	4.0	.	.	.	.	.	96.41	.	.	.	.	.	.	100.0
78	FSC	2081	25	F	7.5	.	.	.	.	.	186.90	.	.	.	.	.	.	100.0
79	FSC	2082	23	C	9.6	.	.	.	.	.	220.88	.	.	.	.	.	.	100.0
80	FSO	2125	22	C	3.9	.	.	.	.	.	85.85	.	.	.	.	.	.	100.0
81	FCG	2126	21	F	8.9	.	.	.	.	.	185.86	.	.	.	.	.	.	100.0
82	ROD	2140	25	C	5.4	.	.	.	.	.	133.27	.	.	.	.	.	.	100.0

Table 1 (concluded)

SYMBOLS:

SITE: FCG = FORT CLAYTON GENERAL PURPOSE TEST AREA
ROD = RODMAN MUNITIONS SURVEILLANCE SITE
MCK = MCKENZIE FOREST EXPOSURE SITE
FSO = FORT SHERMAN OPEN EXPOSURE SITE
FSC = FORT SHERMAN COASTAL EXPOSURE SITE

CJDATE: THE FIRST DIGIT REFERS TO THE YEAR IN WHICH THE SAMPLE WAS COLLECTED, EITHER 1982 OR 1983. THE LAST 3 DIGITS REFER TO THE DAY OF THE YEAR ACCORDING TO THE JULIAN DATE SYSTEM FOR A REGULAR YEAR.

TIME: COLLECTION TIME IN HOURS (hr).

FILTER: FIBERGLASS (F) OR CELLULOSE (C).

CRATE: COLLECTION RATE. WEIGHT TOTAL IN MILLIGRAMS DIVIDED BY COLLECTION TIME IN HOURS, (mg/hr).

WT: WEIGHT OF PARTICLES COLLECTED IN MILLIGRAMS, (mg).

PC: PERCENT OF WEIGHT COLLECTED, %.

1-6: REFERS TO THE STAGE NUMBER. STAGE 6 IS THE HIGH VOLUME FILTER THAT IS PLACED BENEATH THE SET OF IMPACTOR STAGES.

TABLE 2. EDX ANALYSIS RESULTS, BY ELEMENT

OBS	SITE	FILTER	CJDATE	STAGE	ANALYSIS	ELEMENTS Al	Ca	Cl	Cr	Cu	Fe	K	Mg	Mn	Na	P	Pb	S	Si	Sn	Ti	V	Zn
1	FCG	F	2064	1	1	3	2	4	.	.	.	6	7	.	5	.	.	.	1	.	.	.	.
2	FCG	F	2064	1	2	3	2	6	.	.	.	4	.	.	5	.	.	7	1	.	.	.	.
3	FCG	F	2064	1	3	4	3	2	.	.	.	5	7	.	6	.	.	8	1	.	.	.	.
4	FCG	F	2064	1	4	3	2	5	.	.	.	4	7	.	8	.	.	6	1	.	.	.	.
5	FCG	F	2064	1	5	4	2	3	.	.	.	5	8	.	6	.	.	7	1	.	.	.	.
6	FCG	F	2064	1	6	3	2	.	.	.	.	5	7	.	4	.	.	6	1	.	.	.	.
7	FCG	F	2064	1	7	5	2	.	.	.	.	3	7	.	6	.	.	4	1	.	.	.	.
8	FCG	F	2064	1	8	3	2	5	.	.	10	6	8	.	4	.	.	7	1	.	9	.	.
9	FCG	F	2064	1	9	2	8	3	.	.	.	5	6	.	7	.	.	4	1	.	.	.	.
10	FCG	F	2064	1	10	3	2	4	.	.	.	5	8	.	6	.	.	7	1	.	.	.	.
11	FCG	F	2064	1	11	3	2	4	.	.	.	6	8	.	5	.	.	7	1	.	.	.	.
12	FCG	F	2064	1	12	3	2	6	.	.	.	4	7	.	5	.	.	8	1	.	.	.	.
13	FCG	F	2064	1	13	3	2	4	.	.	.	6	8	.	5	.	.	7	1	.	.	.	.
14	FCG	F	2064	1	14	3	2	4	.	.	.	6	8	.	5	.	.	7	1	.	.	.	.
15	FCG	F	2064	1	15	4	2	3	.	.	.	5	8	.	6	.	.	7	1	.	.	.	.
16	FCG	F	2064	1	16	3	2	5	.	.	.	6	8	.	4	.	.	7	1	.	.	.	.
17	FCG	F	2064	1	17	3	2	4	.	.	9	6	8	.	5	.	.	7	1	.	.	.	.
18	FCG	F	2064	1	18	3	2	4	.	.	10	6	8	.	5	.	.	7	1	.	9	.	.
19	FCG	F	2064	1	19	3	2	5	.	.	9	6	8	.	4	.	.	7	1	.	.	.	.
20	FCG	F	2064	1	20	3	2	4	.	.	.	6	8	.	5	.	.	7	1	.	.	.	.
21	FCG	F	2064	1	21	4	2	5	.	.	10	6	9	.	8	7	.	3	1	.	.	.	.
22	FCG	C	2070	1	1	3	8	7	.	.	2	4	.	.	.	5	.	6	1	.	.	.	.
23	FCG	C	2070	1	2	2	5	.	.	.	.	.	4	.	6	.	.	3	1	.	.	.	.
24	FCG	C	2070	1	3	1	7	.	.	.	.	3	4	.	8	5	.	2	6	.	.	.	.
25	FCG	C	2070	1	4	.	5	6	.	.	4	3	.	.	.	.	.	1	2	.	.	.	.
26	FCG	C	2070	1	5	6	2	4	.	.	.	3	7	.	.	.	.	1	5	.	.	.	.
27	FCG	C	2070	1	6	.	3	1	.	.	.	2	.	.	.	.	.	.	.	.	.	.	.
28	FCG	C	2070	1	7	4	.	.	.	.	.	2	5	.	6	.	.	1	3	.	.	.	.
29	FCG	C	2070	1	8	.	1	3	.	.	.	2	.	.	.	.	.	4	5	.	.	.	.
30	FCG	C	2070	1	9	6	.	3	.	.	.	1	5	.	.	.	.	2	4	.	.	.	.
31	FSC	C	2082	1	1	6	4	1	.	.	.	7	8	.	3	.	.	5	2	.	.	.	.
32	FSC	C	2082	1	2	6	5	1	.	.	.	8	7	.	4	.	.	2	3	.	.	.	.
33	FSC	C	2082	1	3	5	3	1	.	.	.	7	8	.	6	.	.	2	4	.	.	.	.
34	FSC	C	2082	1	4	6	4	1	.	.	9	8	7	.	5	.	.	2	3	.	.	.	.
35	FSC	C	2082	1	5	6	4	1	.	.	9	8	7	.	5	.	.	2	3	.	.	.	.
36	FSC	C	2082	1	6	3	2	1	.	.	5	4	6	.	3	.	.	2	2	.	.	.	.
37	FSC	C	2082	1	7	4	2	1	.	.	6	6	5	.	3	.	.	2	2	.	.	.	.
38	FSC	C	2082	1	8	5	4	1	.	.	8	.	7	.	6	.	.	3	2	.	.	.	.
39	FSC	C	2082	1	9	5	2	1	.	.	4	.	5	.	3	.	.	2	.	.	.	.	.
40	FSC	C	2082	1	10	7	4	1	.	.	9	6	8	.	5	.	.	3	2	.	.	.	.
41	MCK	C	2082	1	1	3	6	2	.	.	7	5	8	.	.	.	.	4	1	.	.	.	.
42	MCK	C	2082	1	2	4	3	2	.	.	5	7	6	.	8	.	.	3	1	.	.	.	.
43	MCK	C	2082	1	3	4	3	1	.	.	6	.	5	.	7	.	.	3	2	.	.	.	.
44	MCK	C	2082	2	1	6	2	1	.	.	.	.	3	.	7	4	.	.	5	.	.	.	.
45	MCK	C	2082	2	2	3	4	2	.	.	5	5	6	.	.	.	.	4	1	.	.	.	.
46	MCK	C	2082	2	3	5	3	1	.	.	.	.	.	.	.	.	.	4	2	.	.	.	.
47	MCK	C	2082	3	1	.	4	1	.	.	.	.	.	.	.	.	.	3	2	.	.	.	.

Table 2 (cont)

OBS	SITE	FILTER	CJDATE	STAGE	ANALYSIS	Al	Ca	Cl	Cr	Cu	Fe	K	Mg	Mn	Na	P	Pb	S	Si	Sn	Ti	V	Zn
						ELEMENTS																	
48	MCK	C	2082	3	2	5	2	1	.	.	.	.	6	.	7	.	.	4	3	.	.	.	.
49	MCK	C	2082	3	3	.	3	1	.	.	4	.	6	.	.	.	.	2	5	.	.	.	.
50	MCK	C	2082	3	4	4	3	1	.	.	7	.	5	.	6	.	.	2	.	.	.	.	.
51	MCK	C	2082	4	1	6	3	2	.	5	7	4	8	.	9	.	.	1	1	.	10	.	.
52	MCK	C	2082	4	2	4	3	2	.	9	8	7	5	.	6	.	.	1	2	.	.	.	.
53	MCK	C	2082	5	1	3	4	.	.	6	.	3	5	.	3	.	.	1	2	.	.	.	.
54	MCK	C	2082	5	2	.	3	.	.	4	4	3	.	.	.	.	.	1	2	.	.	.	.
55	MCK	C	2082	5	3	.	4	.	.	.	.	3	.	.	.	.	.	1	2	.	.	.	.
56	MCK	C	2082	5	4	4	6	.	.	7	.	3	5	.	4	.	.	1	2	.	.	.	.
57	MCK	C	2082	5	5	4	3	.	.	5	5	2	.	.	4	.	.	1	2	.	.	.	.
58	MCK	C	2082	6	1	4	5	3	.	.	6	.	.	.	.	.	.	2	1	.	.	.	.
59	MCK	C	2082	6	2	.	.	.	.	.	1	.	.	.	.	.	.	.	2	.	.	.	.
60	MCK	C	2082	6	3	6	5	2	.	3	.	4	.	.	.	.	.	.	1	.	.	.	.
62	MCK	C	2123	2	2	.	8	1	.	9	.	5	6	.	7	3	.	2	4	.	.	.	.
63	MCK	C	2123	2	3	6	9	1	.	10	.	5	7	.	8	2	.	4	3	.	.	.	.
64	MCK	C	2123	3	1	.	5	2	.	6	.	7	8	.	9	3	.	1	4	.	.	.	.
65	MCK	C	2123	4	1	.	3	.	.	2	.	4	.	.	.	6	.	1	5	.	.	.	.
66	MCK	C	2123	4	2	.	.	.	.	2	.	4	.	.	.	.	.	1	3	.	.	.	.
67	MCK	C	2123	4	3	.	.	.	.	2	.	.	.	.	.	.	.	1	.	.	.	.	.
68	MCK	C	2123	6	1	2	5	.	.	.	.	4	.	.	.	.	.	3	1	.	.	.	.
69	MCK	C	2123	6	2	.	.	.	.	.	.	3	.	.	.	.	.	1	.	.	.	.	.
70	MCK	C	2123	6	3	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.
71	MCK	C	2123	6	4	.	.	.	.	.	.	4	.	.	.	.	.	3	2	.	.	.	1
72	MCK	C	2123	6	5	3	4	.	.	6	.	5	.	.	.	.	.	1	2	.	.	.	.
73	FSC	C	2124	1	1	5	6	1	.	.	3	9	7	.	8	.	.	4	2	.	.	.	.
74	FSC	C	2124	1	2	.	4	1	.	.	.	.	.	.	5	.	.	2	3	.	.	.	.
75	FSC	C	2124	1	3	5	.	1	.	.	3	7	6	.	.	.	.	4	2	.	.	.	.
76	FSC	C	2124	1	4	.	.	1	.	.	.	.	.	.	3	.	.	2	.	.	.	.	.
77	FSC	C	2124	2	1	.	3	1	.	.	.	.	5	.	6	.	.	2	4	.	.	.	.
78	FSC	C	2124	2	2	.	3	1	.	.	.	.	4	.	5	.	.	2	6	.	.	.	.
79	FSC	C	2124	2	3	9	4	1	.	8	7	.	6	.	5	.	.	2	3	.	.	.	.
80	FSC	C	2124	3	1	.	.	.	.	.	3	.	2	.	.	.	.	.	1	.	.	.	.
81	FSC	C	2124	3	2	2	3	.	.	.	.	.	.	.	4	.	.	5	1	.	.	.	.
82	FSC	C	2124	4	1	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.
83	FSC	C	2124	4	2	.	5	.	.	3	.	4	.	.	6	.	.	1	2	.	.	.	.
84	FSC	C	2124	4	3	.	5	.	.	.	.	4	.	.	2	.	.	1	3	.	.	.	.
85	FSC	C	2124	5	1	.	.	.	.	.	4	2	.	.	.	.	.	1	3	.	.	.	.
86	FSC	C	2124	5	2	.	.	.	.	4	.	2	.	.	.	.	.	1	3	.	.	.	.
87	FSC	C	2124	5	3	4	.	.	.	5	.	3	7	.	6	.	.	1	2	.	.	.	.
88	FSC	C	2124	5	4	5	.	.	.	4	.	2	6	.	7	.	.	1	3	.	.	.	.
89	FSC	C	2124	6	1	6	.	2	.	.	.	3	7	.	8	5	.	1	4	.	.	.	.
90	FSC	C	2124	6	2	2	3	.	.	.	7	5	.	.	6	.	.	4	1	.	.	.	.
91	FSC	C	2124	6	3	3	.	.	.	.	1	.	.	.	.	.	.	.	2	.	.	.	.
92	FSC	C	2124	6	4	.	.	1	.	.	.	.	.	.	.	.	.	2	.	.	.	.	.
93	FCG	C	2126	1	1	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2
94	FCG	C	2126	1	2	.	.	.	.	2	.	.	.	.	.	.	.	1	.	.	.	.	.
95	FCG	C	2126	2	1	.	5	.	.	6	.	3	7	.	.	1	.	2	4	.	.	.	.

Table 2 (cont)

OBS	SITE	FILTER	CJDATE	STAGE	ANALYSIS	Al	Ca	Cl	Cr	Cu	Fe	K	Mg	Mn	Na	P	Pb	S	Si	Sn	Ti	V	Zn
						ELEMENTS																	
96	FCG	C	2126	2	2	8	4	.	.	7	6	2	9	.	.	1	.	3	5	.	.	.	.
97	FCG	C	2126	2	3	7	3	5	.	6	.	2	8	.	.	1	.	4	.	.	.	.	.
98	FCG	C	2126	3	1	.	3	.	.	2	.	.	.	.	.	.	.	1	.	.	.	.	.
99	FCG	C	2126	4	1	.	1	.	.	2	.	4	.	.	.	.	.	5	3	.	.	.	.
100	FCG	C	2126	4	2	.	3	.	.	4	.	2	.	.	.	.	.	1	5	.	.	.	.
101	FCG	C	2126	4	3	.	3	.	.	2	.	4	.	.	.	.	.	1	.	.	.	.	.
102	FCG	C	2126	6	1	4	1	3	.	8	7	.	.	.	9	10	.	5	2	.	6	.	.
103	FSO	C	2126	1	1	4	3	2	.	.	7	.	6	.	.	.	.	5	1	.	.	.	.
104	FSO	C	2126	1	2	.	.	2	.	.	3	.	.	.	.	.	.	.	1	.	.	.	.
105	FSO	C	2126	1	3	6	2	4	.	.	3	.	7	.	.	.	.	5	1	.	.	.	.
106	FSO	C	2126	2	1	5	3	2	.	7	8	9	6	.	10	.	.	4	1	.	.	.	.
107	FSO	C	2126	2	2	5	3	1	.	8	9	7	6	.	.	.	.	4	2	.	.	.	.
108	FSO	C	2126	2	3	2	5	3	.	6	7	.	.	.	.	.	.	4	1	.	.	.	.
109	FSO	C	2126	3	1	5	6	3	.	7	8	9	4	.	10	.	.	2	1	.	.	.	.
110	FSO	C	2126	3	2	9	3	1	.	5	6	8	7	.	10	.	.	2	4	.	.	.	.
111	FSO	C	2126	3	3	10	4	1	.	7	9	8	5	.	6	.	.	2	3	.	.	.	.
112	FSO	C	2126	4	1	4	3	.	.	5	6	7	.	.	.	.	.	1	2	.	.	.	.
113	FSO	C	2126	5	1	.	.	.	.	3	.	2	.	.		.	.	1	4	.	.	.	.
114	FSO	C	2126	5	2	.	4	.	.	6	5	3	.	.		.	.	1	2	.	.	.	.
115	FSO	C	2126	5	3	.	.	.	.	4	.	2	.	.		.	.	1	3	.	.	.	.
116	FSO	C	2126	5	4	.	.	.	.	.	.	.	.	.		.	.	1	.	.	.	.	.
117	FSO	C	2126	6	1	3	1	.	.	.	4	.	.	.	.	5	.	.	2	.	.	.	.
118	FSO	C	2126	6	2	3	1	.	.	.	4	.	.	.	.	.	.	.	2	.	.	.	.
119	FSO	C	2126	6	3	.	4	.	.	.	1	.	.	5	.	.	.	.	3	.	2	.	.
120	ROD	C	2140	1	1	8	5	4	.	6	.	2	9	.	10	1	.	3	7	.	.	.	.
121	ROD	C	2140	1	2	.	4	5	.	.	.	7	.	.	.	3	.	2	1	.	.	6	.
122	ROD	C	2140	1	3	.	4	5	.	.	7	6	8	.	9	3	.	2	1	.	.	.	.
123	ROD	C	2140	1	4	7	3	6	.	10	.	5	8	.	9	2	.	4	1	.	.	.	.
124	ROD	C	2140	2	1	7	5	4	.	11	10	2	8	.	9	1	.	3	6	.	.	.	.
125	ROD	C	2140	3	1	4	8	10	.	9	.	7	5	.	6	3	.	1	2	.	.	.	.
126	ROD	C	2140	3	2	.	6	.	.	.	.	5	3	.	4	.	.	1	2	.	.	.	.
127	ROD	C	2140	4	1	3	7	.	.	9	8	6	4	.	5	.	.	1	2	.	.	.	.
128	ROD	C	2140	5	1	.	.	.	.	2	.	4	.	.	.	.	.	1	3	.	.	.	.
129	ROD	C	2140	5	2	.	.	.	.	3	5	2	.	.	.	.	.	1	.	.	.	4	.
130	ROD	C	2140	6	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
131	MCK1	C	2160	2	1	.	.	.	.	4	.	3	.	.	.	1	.	2	.	.	.	.	.
132	MCK1	C	2160	2	2	7	5	4	.	.	.	3	8	.	9	1	.	2	6	.	.	.	.
133	MCK1	C	2160	2	3	.	8	4	.	7	.	3	5	.	6	1	.	2	.	.	.	.	.
134	MCK1	C	2160	4	1	.	.	.	.	.	.	4	5	.	.	2	.	3	1	.	.	.	.
135	MCK1	C	2160	4	2	.	1	.	.	.	6	.	.	.	5	3	.	4	2	.	.	.	.
136	MCK1	C	2160	4	3	2	.	5	.	.	.	6	3	.	.	.	.	4	1	.	.	.	.
137	MCK1	C	2160	4	4	.	.	.	.	.	.	5	.	.	4	2	.	3	1	.	.	.	.
138	MCK1	C	2160	6	1	.	.	.	.	.	.	.	2	.	.	.	.	.	1	.	.	.	.
139	MCK2	C	2160	1	1	.	4	2	.	.	.	3	5	.	.	1	.	.	.	.	.	.	.
140	MCK2	C	2160	2	1	.	.	4	.	.	.	7	5	.	6	1	.	2	3	.	.	.	.
141	MCK2	C	2160	2	2	.	.	4	.	.	.	7	5	.	6	1	.	2	3	.	.	.	.
142	MCK2	C	2160	2	3	.	6	4	.	.	.	5	.	.	.	1	.	3	2	.	.	.	.

Table 2 (cont)

OBS	SITE	FILTER	CJDATE	STAGE	ANALYSIS	Al	Ca	Cl	Cr	Cu	Fe	K	Mg	Mn	Na	P	Pb	S	Si	Sn	Ti	V	Zn
						ELEMENTS																	
143	MCK2	C	2160	2	4	.	.	.	.	.	.	3	.	.	.	1	.	2	.	.	.	.	.
144	MCK2	C	2160	3	1	.	.	.	.	.	.	.	.	.	.	2	.	3	1	.	.	.	.
145	MCK2	C	2160	3	2	.	.	.	.	.	.	.	.	.	.	2	.	3	1	.	.	.	.
146	MCK2	C	2160	3	3	.	.	4	.	.	.	.	.	.	.	2	.	3	1	.	.	.	.
147	MCK2	C	2160	4	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
148	MCK2	C	2160	5	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
149	MCK2	C	2160	6	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
150	MCK3	C	2161	1	1	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.
151	MCK3	C	2161	1	2	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	2	.	.
152	MCK3	C	2161	1	3	.	.	3	.	.	2	.	.	.	.	.	.	4	.	.	1	.	.
153	MCK3	C	2161	1	4	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
154	MCK3	C	2161	2	1	.	.	4	.	5	.	2	.	.	.	1	.	3	.	.	.	.	.
155	MCK3	C	2161	2	2	.	.	4	.	2	.	.	.	.	.	1	.	3	.	.	.	.	.
156	MCK3	C	2161	2	3	.	5	6	.	3	.	4	.	.	.	1	.	2	.	.	.	.	.
157	MCK3	C	2161	2	4	.	5	6	.	3	.	4	.	.	.	1	.	2	.	.	.	.	.
158	MCK3	C	2161	3	1	.	4	.	.	.	.	3	.	.	.	1	.	2	.	.	.	.	.
159	MCK3	C	2161	4	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
160	MCK3	C	2161	4	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
161	MCK3	C	2161	4	3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
162	MCK3	C	2161	5	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
163	MCK3	C	2161	5	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
164	MCK3	C	2161	5	3	.	2	.	.	.	.	3	.	.	.	.	.	1	.	.	.	.	.
165	MCK3	C	2161	6	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
166	MCK3	C	2161	6	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
167	FCG1	C	2203	1	1	3	.	1	.	.	.	.	.	.	.	.	.	.	2	.	4	.	.
168	FCG1	C	2203	1	2	3	.	1	.	.	.	.	4	.	.	.	.	.	2	.	.	.	.
169	FCG1	C	2203	1	3	7	4	1	.	.	6	5	.	.	.	.	.	3	2	.	.	.	.
170	FCG1	C	2203	2	1	3	2	4	.	.	6	8	7	.	.	.	.	5	1	.	.	.	.
171	FCG1	C	2203	2	2	3	2	4	.	.	6	7	8	.	.	.	.	5	1	.	.	.	.
172	FCG1	C	2203	2	3	3	2	4	.	.	6	7	8	.	.	.	.	5	1	.	.	.	.
173	FCG1	C	2203	2	4	2	4	3	.	.	6	7	8	.	.	.	.	5	1	.	.	.	.
174	FCG1	C	2203	3	1	3	4	2	.	.	6	8	7	.	.	.	.	5	1	.	.	.	.
175	FCG1	C	2203	3	2	2	5	3	.	9	6	8	7	.	.	.	.	4	1	.	.	.	.
176	FCG1	C	2203	3	3	2	5	3	.	.	6	8	7	.	.	.	.	4	1	.	.	.	.
177	FCG1	C	2203	3	4	2	3	4	.	.	6	8	7	.	.	.	.	5	1	.	.	.	.
178	FCG1	C	2203	4	1	2	4	7	.	.	5	8	6	.	.	.	.	3	1	.	.	.	.
179	FCG1	C	2203	4	2	2	4	7	.	.	5	8	6	.	.	.	.	3	1	.	.	.	.
180	FCG1	C	2203	4	3	2	4	6	.	.	5	8	7	.	.	.	.	3	1	.	.	.	.
181	FCG1	C	2203	4	4	3	4	5	.	.	6	.	.	.	.	.	.	2	1	.	.	.	.
182	FCG1	C	2203	5	1	3	5	.	.	.	4	6	.	.	.	.	.	2	1	.	.	.	.
183	FCG1	C	2203	5	2	3	5	.	.	.	4	6	.	.	.	.	.	2	1	.	.	.	.
184	FCG1	C	2203	5	3	3	4	.	.	.	6	5	7	.	.	.	.	2	1	.	.	.	.
185	FCG1	C	2203	6	1	.	.	.	.	.	.	3	.	.	.	.	.	2	1	.	.	.	.
186	FCG1	C	2203	6	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
187	FCG1	C	2203	6	3	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.
188	FCG2	C	2203	1	1	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
189	FCG2	C	2203	1	2	.	1	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Table 2 (cont)

OBS	SITE	FILTER	CJDATE	STAGE	ANALYSIS	Al	Ca	Cl	Cr	Cu	Fe	K	Mg	Mn	Na	P	Pb	S	Si	Sn	Ti	V	Zn
						ELEMENTS																	
190	FCG2	C	2203	1	3	.	2	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
191	FCG2	C	2203	1	4	3	.	1	.	.	.	4	5	.	.	.	.	.	2	.	.	.	.
192	FCG2	C	2203	2	1	2	4	3	.	.	6	7	8	.	.	.	.	5	1	.	.	.	.
193	FCG2	C	2203	2	2	2	4	3	.	.	6	8	7	.	.	.	.	5	1	.	.	.	.
194	FCG2	C	2203	2	3	2	4	3	.	.	7	8	6	.	9	.	.	5	1	.	.	.	.
195	FCG2	C	2203	2	4	2	4	3	.	.	7	8	6	.	9	.	.	5	1	.	.	.	.
196	FCG2	C	2203	3	1	2	5	4	.	.	7	.	3	.	.	.	.	6	1	.	.	.	.
197	FCG2	C	2203	3	2	2	5	4	.	.	7	.	3	.	.	.	.	6	1	.	.	.	.
198	FCG2	C	2203	3	3	2	4	3	.	.	5	7	8	.	.	.	.	6	1	.	.	.	.
199	FCG2	C	2203	4	1	3	5	7	.	10	4	6	8	.	.	.	.	2	1	.	9	.	.
200	FCG2	C	2203	4	2	2	5	.	.	.	4	7	6	.	.	.	.	3	1	.	.	.	.
201	FCG2	C	2203	4	3	2	5	7	.	.	4	6	8	.	.	.	.	3	1	.	.	.	.
202	FCG2	C	2203	5	1	3	5	.	.	.	4	6	7	.	.	.	.	2	1	.	.	.	.
203	FCG2	C	2203	5	2	3	5	.	.	.	4	6	7	.	.	.	.	2	1	.	.	.	.
204	FCG2	C	2203	5	3	3	5	.	.	.	4	6	7	.	.	.	.	2	1	.	.	.	.
205	FCG2	C	2203	6	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
206	FCG2	C	2203	6	2	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.
207	FCG2	C	2203	6	3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
208	FCG3	C	2204	1	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
209	FCG3	C	2204	1	2	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
210	FCG3	C	2204	1	3	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
211	FCG3	C	2204	2	1	.	3	2	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.
212	FCG3	C	2204	2	2	2	4	3	.	.	5	6	.	.	.	.	.	.	1	.	7	.	.
213	FCG3	C	2204	2	3	2	4	3	.	.	5	7	.	.	.	.	.	6	1	.	.	.	.
214	FCG3	C	2204	3	1	3	2	4	.	.	6	7	.	.	.	.	.	5	1	.	.	.	.
215	FCG3	C	2204	3	2	3	2	4	.	.	6	7	.	.	.	.	.	5	1	.	.	.	.
216	FCG3	C	2204	3	3	3	2	4	.	.	6	7	.	.	.	.	.	5	1	.	8	.	.
217	FCG3	C	2204	4	1	2	4	.	.	6	5	7	8	.	.	.	.	3	1	.	.	.	.
218	FCG3	C	2204	4	2	2	4	.	.	.	5	6	7	.		.	.	3	1	.	.	.	.
219	FCG3	C	2204	4	3	2	4	.	.	.	5	6	7	.	.	.	.	3	1	.	.	.	.
220	FCG3	C	2204	5	1	3	4	.	.	.	6	5	.	.	.	.	.	2	1	.	.	.	.
221	FCG3	C	2204	5	2	3	5	.	.	.	4	6	.	.	.	.	.	1	2	.	.	.	.
222	FCG3	C	2204	5	3	4	3	.	.	.	5	6	.	.	.	.	.	1	2	.	.	.	.
223	FCG3	C	2204	6	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
224	FCG3	C	2204	6	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
225	FCG4	C	2204	1	1	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
226	FCG4	C	2204	1	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
227	FCG4	C	2204	1	3	.	.	3	.	2	.	.	.	.	.	1	.	.	.	.	.	.	.
228	FCG4	C	2204	2	1	5	3	2	.	8	7	.	6	.	.	.	.	4	1	.	.	.	.
229	FCG4	C	2204	2	2	5	4	1	.	.	8	7	6	.	.	.	.	3	2	.	.	.	.
230	FCG4	C	2204	2	3	6	3	1	.	.	8	5	7	.	.	.	.	4	2	.	9	.	.
231	FCG4	C	2204	3	1	5	3	2	.	.	7	.	6	.	.	.	.	4	1	.	.	.	.
232	FCG4	C	2204	3	2	5	4	2	.	.	7	.	6	.	.	.	.	3	1	.	8	.	.
233	FCG4	C	2204	3	3	.	3	2	.	.	.	.	.	.	.	.	.	4	1	.	.	.	.
234	FCG4	C	2204	4	1	4	3	5	.	7	6	9	8	.	.	.	.	2	1	.	.	.	.
235	FCG4	C	2204	4	2	4	3	6	.	.	7	8	5	.	.	.	.	2	1	.	.	.	.
236	FCG4	C	2204	4	3	4	3	5	.	.	7	8	6	.	9	.	.	2	1	.	.	.	.

Table 2 (cont)

OBS	SITE	FILTER	CJDATE	STAGE	ANALYSIS	Al	Ca	Cl	Cr	Cu	Fe	K	Mg	Mn	Na	P	Pb	S	Si	Sn	Ti	V	Zn
						ELEMENTS																	
237	FCG4	C	2204	5	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
238	FCG4	C	2204	5	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
239	FCG4	C	2204	5	3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
240	FCG4	C	2204	6	1	.	3	4	.	.	5	6	.	.	.	.	.	1	2	.	.	.	.
241	FCG4	C	2204	6	2	4	7	2	.	.	3	8	5	.	.	.	.	.	1	.	6	.	.
242	FCG4	C	2204	6	3	.	1	4	.	.	6	3	.	.	.	.	.	5	.	.	2	.	.
243	FSO	C	2207	1	1	3	4	2	.	9	6	.	7	.	8	.	.	5	1	.	.	.	.
244	FSO	C	2207	1	2	4	3	2	.	.	6	.	7	.	8	.	.	5	1	.	.	.	.
245	FSO	C	2207	1	3	5	4	2	.	.	6	.	7	.	8	.	.	3	1	.	.	.	.
246	FSO	C	2207	1	4	5	2	4	.	.	.	.	6	.	7	.	.	1	3	.	.	.	.
247	FSO	C	2207	1	5	3	7	2	.	.	.	8	6	.	4	.	.	5	1	.	.	.	.
248	FSO	C	2207	1	6	.	.	1	.	.	.	.	3	.	2	.	.	4	.	.	.	.	.
249	FSO	C	2207	1	7	.	4	2	.	.	.	.	.	.	.	.	.	3	1	.	.	.	.
250	FSO	C	2207	2	1	2	5	3	.	8	7	6	9	.	10	.	.	4	1	.	.	.	.
251	FSO	C	2207	2	2	2	3	6	.	9	7	5	8	1	.	.	.	4	1	.	10	.	.
252	FSO	C	2207	2	3	2	3	6	.	9	7	4	8	.	.	.	.	5	1	.	10	.	.
253	FSO	C	2207	2	4	2	3	5	.	8	7	4	9	.	.	11	.	6	1	.	10	.	.
254	FSO	C	2207	2	5	2	3	4	.	8	7	6	9	2	.	11	.	5	1	.	10	.	.
255	FSO	C	2207	3	1	2	3	5	.	8	7	6	9	.	10	.	.	4	1	.	.	.	.
256	FSO	C	2207	3	2	6	4	8	.	3	2	5	.	.	.	.	.	7	1	.	.	.	.
257	FSO	C	2207	3	3	2	4	.	.	5	3	6	8	.	.	.	.	7	1	.	.	.	.
258	FSO	C	2207	3	4	2	3	6	.	9	7	5	8	.	.	.	.	4	1	.	10	.	.
259	FSO	C	2207	3	5	2	4	6	.	10	8	5	7	.	9	.	.	3	1	.	.	.	.
260	FSO	C	2207	3	6	2	4	6	.	11	8	5	7	.	9	.	.	3	1	.	10	.	.
261	FSO	C	2207	4	1	2	4	7	.	9	5	6	8	.	10	.	.	3	1	.	.	.	.
262	FSO	C	2207	4	2	2	4	8	.	10	7	5	6	.	9	.	.	3	1	.	.	.	.
263	FSO	C	2207	4	3	2	4	8	.	9	6	5	7	.	10	.	.	3	1	.	.	.	.
264	FSO	C	2207	4	4	2	4	8	.	9	6	5	7	.	10	.	.	3	1	.	.	.	.
265	FSO	C	2207	4	5	2	4	9	.	10	6	5	8	1	.	.	.	3	1	.	7	.	.
266	FSO	C	2207	4	6	2	4	9	.	10	6	5	7	.	.	.	.	3	1	.	8	.	.
267	FSO	C	2207	5	1	2	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.
268	FSO	C	2207	5	2	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.
269	FSO	C	2207	5	3	4	3	.	.	.	5	6	.	.	.	.	.	2	1	.	.	.	.
270	FSO	C	2207	5	4	3	4	.	.	.	5	7	8	.	.	.	.	2	1	.	6	.	.
271	FSO	C	2207	5	5	4	3	.	.	.	6	5	.	.	.	.	.	2	1	.	.	.	.
272	FSO	C	2207	5	6	2	4	7	.	8	5	6	9	.	.	.	.	3	1	.	.	.	.
273	FSO	C	2207	5	7	2	4	8	.	.	6	5	7	.	9	.	.	3	1	.	.	.	.
274	FSO	C	2207	5	8	2	4	7	.	8	6	5	9	.	10	.	.	3	1	.	.	.	.
275	FSO	C	2207	5	9	2	4	7	.	8	6	5	9	.	10	.	.	3	1	.	.	.	.
276	FSO	C	2207	6	1	2	.	.	.	.	4	.	.	.	.	.	.	3	1	.	.	.	.
277	FSO	C	2207	6	2	2	4	.	.	5	6	.	.	.	.	.	.	3	1	.	.	.	.
278	FSO	C	2207	6	3	2	.	.	.	.	.	.	4	.	5	.	.	3	1	.	.	.	.
279	FSO	C	2207	6	4	3	2	.	.	.	.	4	.	.	.	.	.	.	1	.	.	.	.
280	FSO	C	2207	6	5	4	3	.	.	.	.	5	.	.	.	.	.	2	1	.	.	.	.
281	FSO	C	2207	6	6	3	4	.	.	.	.	5	.	.	.	.	.	2	1	.	.	.	.
282	FSC	C	2217	1	1	8	4	1	.	.	7	6	.	.	2	.	.	3	5	.	.	.	.
283	FSC	C	2217	1	2	7	4	1	.	.	.	6	.	.	2	.	.	3	5	.	.	.	.

Table 2 (cont)

OBS	SITE	FILTER	CJDATE	STAGE	ANALYSIS	Al	Ca	Cl	Cr	Cu	Fe	K	Mg	Mn	Na	P	Pb	S	Si	Sn	Ti	V	Zn
						ELEMENTS																	
284	FSC	C	2217	1	3	7	4	1	.	9	8	6	.	.	2	.	.	3	5	.	.	.	.
285	FSC	C	2217	2	1	5	4	1	.	.	8	6	.	.	7	.	.	2	3	.	.	.	.
286	FSC	C	2217	2	2	6	4	1	.	.	8	7	.	.	5	.	.	2	3	.	.	.	.
287	FSC	C	2217	2	3	6	4	1	.	.	8	7	.	.	5	.	.	2	3	.	.	.	.
288	FSC	C	2217	2	4	6	4	1	.	.	8	7	.	.	5	.	.	2	3	.	.	.	.
289	FSC	C	2217	3	1	3	4	5	.	.	.	.	7	.	6	.	.	2	1	.	.	.	.
290	FSC	C	2217	3	2	3	4	5	.	.	.	.	7	.	6	.	.	2	1	.	.	.	.
291	FSC	C	2217	3	3	3	4	5	.	.	.	.	7	.	6	.	.	2	1	.	.	.	.
292	FSC	C	2217	3	4	3	4	5	.	.	.	.	7	.	6	.	.	2	1	.	.	.	.
293	FSC	C	2217	4	1	4	3	5	.	8	7	6	.	.	.	.	.	2	1	.	9	.	.
294	FSC	C	2217	4	2	4	3	5	.	.	7	6	.	.	.	.	.	2	1	.	8	.	.
295	FSC	C	2217	4	3	3	4	5	.	.	9	6	8	.	7	.	.	2	1	.	.	.	.
296	FSC	C	2217	5	1	3	4	.	.	7	6	5	8	.	.	.	.	2	1	.	.	.	.
297	FSC	C	2217	5	2	4	3	.	.	.	.	.	.	.	.	.	.	2	1	.	.	.	.
298	FSC	C	2217	5	3	4	3	.	.	.	5	.	6	.	.	.	.	2	1	.	.	.	.
299	FSC	C	2217	5	4	2	4	.	.	.	.	5	6	.	7	.	.	3	1	.	.	.	.
300	FSC	C	2217	5	5	3	4	.	.	.	.	5	6	.	7	.	.	2	1	.	.	.	.
301	FSC	C	2217	5	6	3	4	.	.	7	6	5	.	.	.	.	.	2	1	.	.	.	.
302	FSC	C	2217	6	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
303	FSC	C	2217	6	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
304	FSC	C	2217	6	3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
305	FSC	C	2217	6	4	.	.	.	.	.	.	.	.	.	.	.	.	2	1	.	.	.	.
306	FSO	C	2217	1	1	.	3	2	.	.	5	6	.	.	.	.	.	4	1	.	.	.	.
307	FSO	C	2217	1	2	3	5	2	.	.	8	6	9	.	7	.	.	4	1	.	.	.	.
308	FSO	C	2217	1	3	2	4	3	.	.	.	6	8	.	7	.	.	5	1	.	.	.	.
309	FSO	C	2217	1	4	3	5	2	.	.	.	8	7	.	6	.	.	4	1	.	.	.	.
310	FSO	C	2217	1	5	3	2	4	.	.	8	7	6	.	9	.	.	5	1	.	.	.	.
311	FSO	C	2217	2	1	4	2	5	10	.	6	7	8	.	9	.	.	3	1	.	11	.	.
312	FSO	C	2217	2	2	5	2	4	11	.	6	7	8	10	9	.	.	3	1	.	12	.	.
313	FSO	C	2217	2	3	4	2	5	.	.	6	7	8	10	9	.	.	3	1	.	11	.	.
314	FSO	C	2217	2	4	4	2	5	.	.	6	7	8	10	9	.	.	3	1	.	11	.	.
315	FSO	C	2217	3	1	2	4	5	.	.	9	6	7	.	8	.	.	3	1	.	.	.	.
316	FSO	C	2217	3	2	2	3	5	.	.	8	6	7	.	9	.	.	4	1	.	.	.	.
317	FSO	C	2217	3	3	4	3	5	.	.	7	6	9	.	8	.	.	2	1	.	.	.	.
318	FSO	C	2217	3	4	3	4	5	.	.	8	6	7	.	9	.	.	2	1	.	.	.	.
319	FSO	C	2217	4	1	4	3	5	.	.	7	6	8	.	9	.	.	2	1	.	10	.	.
320	FSO	C	2217	4	2	4	3	5	.	.	7	6	8	.	9	.	.	2	1	.	.	.	.
321	FSO	C	2217	4	3	4	3	5	.	.	7	6	8	.	9	.	.	2	1	.	.	.	.
322	FSO	C	2217	5	1	3	4	.	.	.	6	5	.	.	.	.	.	2	1	.	.	.	.
323	FSO	C	2217	5	2	3	4	.	.	.	6	5	.	.	.	.	.	2	1	.	7	.	.
324	FSO	C	2217	5	3	3	4	.	.	.	6	5	.	.	.	.	.	2	1	.	7	.	.
325	FSO	C	2217	5	4	3	4	.	.	.	6	5	.	.	.	.	.	2	1	.	7	.	.
326	FSO	C	2217	6	1	.	2	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.
327	FSO	C	2217	6	2	.	2	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.
328	FSO	C	2217	6	3	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.
329	FCG	C	2363	1	1	.	.	1	.	3	.	.	.	.	.	.	.	.	2	.	.	.	.
330	FCG	C	2363	1	2	.	.	2	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.

Table 2 (cont)

OBS	SITE	FILTER	CJDATE	STAGE	ANALYSIS	Al	Ca	Cl	Cr	Cu	Fe	K	Mg	Mn	Na	P	Pb	S	Si	Sn	Ti	V	Zn
						ELEMENTS																	
331	FCG	C	2363	1	3	.	3	2	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.
332	FCG	C	2363	1	4	4	.	1	.	.	.	.	.	.	.	.	.	2	3	.	.	.	.
333	FCG	C	2363	1	5	3	.	2	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.
334	FCG	C	2363	1	6	.	.	1	.	.	.	.	.	.	.	.	.	.	2	.	.	.	.
335	FCG	C	2363	1	7	.	3	2	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.
336	FCG	C	2363	1	8	.	.	1	.	.	.	.	.	.	.	.	.	.	2	.	.	.	.
337	FCG	C	2363	1	9	.	.	1	.	.	.	.	.	.	.	.	.	.	2	.	.	.	.
338	FCG	C	2363	1	10	.	3	2	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.
339	FCG	C	2363	1	11	3	.	2	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.
340	FCG	C	2363	1	12	.	3	2	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.
341	FCG	C	2363	2	1	.	2	1	.	.	.	.	.	.	5	.	.	3	4	.	.	.	.
342	FCG	C	2363	2	2	7	2	1	.	8	.	.	6	.	5	.	.	4	3	.	.	.	.
343	FCG	C	2363	2	3	.	3	1	.	.	4	.	.	.	.	.	.	.	2	.	.	.	.
344	FCG	C	2363	2	4	6	3	1	.	.	8	.	7	.	5	.	.	4	2	.	.	.	.
345	FCG	C	2363	2	5	5	6	1	.	.	.	.	4	.	3	.	.	7	2	.	.	.	.
346	FCG	C	2363	2	6	9	7	1	.	3	.	8	5	.	4	.	.	6	2	.	.	.	.
347	FCG	C	2363	2	7	.	6	1	.	.	.	.	4	.	3	.	.	5	2	.	.	.	.
348	FCG	C	2363	2	8	.	3	1	.	.	.	.	.	.	4	.	.	5	2	.	.	.	.
349	FCG	C	2363	2	9	.	3	1	.	7	6	.	.	.	5	.	.	4	2	.	.	.	.
350	FCG	C	2363	2	10	7	3	1	.	9	8	.	6	.	4	.	.	5	2	.	.	.	.
351	FCG	C	2363	3	1	.	.	2	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.
352	FCG	C	2363	3	2	.	.	2	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.
353	FCG	C	2363	3	3	.	.	2	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.
354	FCG	C	2363	3	4	.	.	2	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.
355	FCG	C	2363	3	5	.	.	2	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.
356	FCG	C	2363	3	6	.	.	2	.	.	.	.	.	.	3	.	.	.	1	.	.	.	.
357	FCG	C	2363	3	7	.	2	1	.	.	3	.	.	.	.	.	.	.	.	.	.	.	.
358	FCG	C	2363	6	1	.	2	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.
359	FCG	C	2363	6	2	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.
360	FCG	C	2363	6	3	.	.	.	.	.	.	1	.	.	.	.	.	.	2	.	.	.	.
361	FSC	F	3018	1	1	.	1	2	.	.	.	4	.	.	.	.	.	3	.	.	.	.	.
362	FSC	F	3018	1	2	.	.	1	.	.	.	.	.	.	.	.	.	2	.	.	.	.	.
363	FSC	F	3018	1	3	.	.	1	.	.	.	.	.	.	.	.	.	2	.	.	.	.	.
364	FSC	F	3018	1	4	.	.	1	.	.	.	.	.	.	.	.	.	2	.	.	.	.	.
365	FSC	F	3018	2	1	.	.	1	.	.	.	.	.	.	.	.	.	2	.	.	.	.	.
366	FSC	F	3018	2	2	.	.	1	.	.	3	.	.	.	.	.	.	2	.	.	.	.	.
367	FSC	F	3018	2	3	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
368	FSC	F	3018	2	4	.	5	1	.	.	3	4	.	.	.	.	.	2	.	.	.	.	.
369	FSC	F	3018	3	1	3	.	1	.	.	4	.	.	.	.	.	.	2	.	.	.	.	.
370	FSC	F	3018	3	2	2	.	1	.	.	4	.	.	.	.	.	.	3	.	.	.	.	.
371	FSC	F	3018	3	3	2	.	1	.	.	4	.	.	.	.	.	.	3	.	.	.	.	.
372	FSC	F	3018	4	1	4	.	1	.	.	2	.	.	.	.	.	.	3	.	.	.	.	.
373	FSC	F	3018	4	2	4	.	1	.	.	2	.	.	.	.	.	.	3	.	.	.	.	.
374	FSC	F	3018	5	1	3	.	.	.	.	2	.	.	.	.	.	.	1	.	.	.	.	.
375	FSO	F	3018	1	1	4	2	3	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.
376	FSO	F	3018	1	2	4	2	3	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.
377	FSO	F	3018	1	3	3	.	1	.	.	2	.	.	.	.	.	.	4	.	.	.	.	.

Table 2 (cont)

OBS	SITE	FILTER	CJDATE	STAGE	ANALYSIS	Al	Ca	Cl	Cr	Cu	Fe	K	Mg	Mn	Na	P	Pb	S	Si	Sn	Ti	V	Zn
						ELEMENTS																	
378	FSO	F	3018	1	4	5	3	1	.	.	2	.	6	.	.	.	.	4	.	.	.	.	.
379	FSO	F	3018	2	1	6	3	1	.	.	2	4	7	.	.	.	.	5	.	.	.	.	.
380	FSO	F	3018	2	2	5	3	1	.	.	2	.	6	.	.	.	.	4	.	.	.	.	.
381	FSO	F	3018	2	3	3	4	1	.	.	2	.	5	.	.	.	.	6	.	.	.	.	.
382	FSO	F	3018	3	1	3	.	1	.	.	2	.	.	.	.	.	.	.	.	.	.	.	.
383	FSO	F	3018	3	2	.	1	.	.	4	.	.	3	.	.	.	.	2	.	.	.	.	.
384	FSO	F	3018	3	3	3	2	1	.	8	4	7	6	.	.	.	.	5	.	.	.	.	.
385	FSO	F	3018	3	4	5	2	1	.	7	3	6	.	.	.	.	.	4	.	.	.	.	.
386	FSO	F	3018	4	1	4	3	1	.	.	2	5	.	.	.	.	.	.	.	.	.	.	.
387	FSO	F	3018	4	2	4	3	1	.	6	2	5	.	.	.	.	.	7	.	.	.	.	.
388	FSO	F	3018	5	1	4	.	1	.	.	3	.	.	.	.	.	.	2	.	.	.	.	.
389	FSO	F	3018	5	2	4	.	1	.	.	3	.	.	.	.	.	.	2	.	.	.	.	.
390	FSO	F	3018	5	3	4	.	1	.	.	3	.	5	.	.	.	.	2	.	.	.	.	.
391	FSO	F	3018	5	4	4	6	1	.	8	3	7	5	.	.	.	.	2	.	.	.	.	.
392	FSO	F	3018	5	5	4	.	1	.	.	3	.	.	.	.	.	.	2	.	.	.	.	.
393	FSO	F	3018	5	6	3	.	1	.	.	.	.	4	.	.	.	.	2	.	.	.	.	.
394	FSC	F	3025	1	1	.	.	1	.	.	.	.	.	.	.	.	.	2	.	.	.	.	.
395	FSC	F	3025	1	2	.	4	1	.	.	3	.	.	.	.	.	.	2	.	.	.	.	.
396	FSC	F	3025	1	3	.	.	1	.	.	.	.	.	.	.	.	.	2	.	.	.	.	.
397	FSC	F	3025	1	4	.	.	1	.	.	.	.	.	.	3	.	.	2	.	.	.	.	.
398	FSC	F	3025	1	5	.	.	1	.	.	.	.	.	.	.	.	.	2	.	.	.	.	.
399	FSC	F	3025	1	6	.	.	1	.	.	.	.	.	.	.	.	.	2	.	.	.	.	.
400	FSC	F	3025	2	1	2	.	1	.	.	4	5	.	.	.	.	.	3	.	.	.	.	.
401	FSC	F	3025	2	2	2	.	1	.	.	3	5	.	.	.	.	.	4	.	.	.	.	.
402	FSC	F	3025	2	3	2	.	1	.	.	3	5	.	.	.	.	.	4	.	.	.	.	.
403	FSC	F	3025	2	4	2	.	1	.	.	4	.	.	.	.	.	.	3	.	.	.	.	.
404	FSC	F	3025	2	5	2	.	1	.	.	4	.	.	.	.	.	.	3	.	.	.	.	.
405	FSC	F	3025	3	1	2	.	1	.	.	3	.	.	.	.	.	.	4	.	.	.	.	.
406	FSC	F	3025	3	2	2	.	1	.	.	3	5	.	.	.	.	.	4	.	.	.	.	.
407	FSC	F	3025	3	3	2	.	1	.	.	3	5	.	.	.	.	.	4	.	.	.	.	.
408	FSC	F	3025	3	4	2	.	1	.	.	3	5	.	.	.	.	.	4	.	.	6	.	.
409	FSC	F	3025	3	5	2	.	1	.	.	3	4	.	.	.	.	.	5	.	.	6	.	.
410	FSC	F	3025	4	1	2	.	1	.	.	3	5	.	.	.	.	.	4	.	.	.	.	.
411	FSC	F	3025	4	2	2	.	1	.	.	3	5	.	.	.	.	.	4	.	.	.	.	.
412	FSC	F	3025	4	3	2	.	1	.	.	3	5	.	.	.	.	.	4	.	.	.	.	.
413	FSC	F	3025	4	4	2	.	1	.	.	3	5	.	.	.	.	.	4	.	.	.	.	.
414	FSC	F	3025	4	5	2	.	1	.	.	3	5	.	.	.	.	.	4	.	.	.	.	.
415	MCK	F	3025	1	1	4	3	1	.	.	.	2	.	.	.	.	.	.	.	.	.	.	.
416	MCK	F	3025	1	2	.	3	1	.	.	.	2	.	.	.	.	.	.	.	.	.	.	.
417	MCK	F	3025	1	3	.	2	1	.	.	.	3	.	.	.	.	.	.	.	.	.	.	.
418	MCK	F	3025	1	4	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
419	MCK	F	3025	1	5	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
420	MCK	F	3025	1	6	.	3	1	.	.	.	2	.	.	.	.	.	4	.	.	.	.	.
421	MCK	F	3025	1	7	.	.	1	.	.	.	.	.	.	.	.	.	2	.	.	.	.	.
422	MCK	F	3025	1	8	.	2	1	.	.	.	4	.	.	.	.	.	3	.	.	.	.	.
423	MCK	F	3025	1	9	.	.	1	.	.	.	.	.	.	.	.	.	2	.	.	.	.	.
424	MCK	F	3025	2	1	2	.	1	.	.	3	4	.	.	.	.	.	.	.	.	.	.	.

Table 2 (cont)

OBS	SITE	FILTER	CJDATE	STAGE	ANALYSIS	Al	Ca	Cl	Cr	Cu	Fe	K	Mg	Mn	Na	P	Pb	S	Si	Sn	Ti	V	Zn
						ELEMENTS																	
425	MCK	F	3025	2	2	2	.	1	.	.	3	5	.	.	.	.	.	4	.	.	.	.	.
426	MCK	F	3025	2	3	2	.	1	.	.	3	5	.	.	.	.	.	4	.	.	.	.	.
427	MCK	F	3025	2	4	2	.	1	.	.	3	5	.	.	.	.	.	4	.	.	.	.	.
428	MCK	F	3025	2	5	2	.	1	.	.	3	5	.	.	.	.	.	4	.	.	.	.	.
429	MCK	F	3025	2	6	2	.	1	.	.	3	.	.	.	.	.	.	4	.	.	.	.	.
430	MCK	F	3025	2	7	2	.	1	.	.	3	.	.	.	.	.	.	4	.	.	.	.	.
431	MCK	F	3025	3	1	2	.	1	.	.	3	5	.	.	.	.	.	4	.	.	.	.	.
432	MCK	F	3025	3	2	2	.	1	.	.	3	5	.	.	.	.	.	4	.	.	.	.	.
433	MCK	F	3025	3	3	2	.	1	.	.	3	.	.	.	.	.	.	4	.	.	.	.	.
434	MCK	F	3025	3	4	1	.	2	.	.	3	5	.	.	.	.	.	4	.	.	.	.	.
435	MCK	F	3025	4	1	2	.	1	.	.	3	5	.	.	.	.	.	4	.	.	.	.	.
436	MCK	F	3025	4	2	2	.	1	.	.	3	.	.	.	.	.	.	4	.	.	.	.	.
437	MCK	F	3025	4	3	2	.	1	.	.	4	.	.	.	.	.	.	3	.	.	.	.	.
438	MCK	F	3025	4	4	2	.	1	.	.	4	.	.	.	.	.	.	3	.	.	.	.	.
439	MCK	F	3025	5	1	2	.	.	.	.	4	3	.	.	.	.	.	1	.	.	.	.	.
440	MCK	F	3025	5	2	3	.	.	.	.	4	2	.	.	.	.	.	1	.	.	.	.	.
441	MCK	F	3025	5	3	3	.	.	.	.	4	2	.	.	.	.	.	1	.	.	.	.	.
442	MCK	F	3025	6	1	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.
443	MCK	F	3025	6	2	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.
444	MCK	F	3025	6	3	.	2	.	.	.	.	3	.	.	.	.	.	.	1	.	.	.	.
445	MCK	F	3025	6	4	.	2	.	.	.	.	3	.	.	.	.	.	.	1	.	.	.	.
446	MCK	F	3025	6	5	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.
447	MCK	F	3025	6	6	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.
448	FSO	F	3038	1	1	.	3	4	.	.	2	.	.	.	.	.	.	1	.	.	.	.	.
449	FSO	F	3038	1	2	.	3	4	.	.	2	.	.	.	.	.	.	1	.	.	.	.	.
450	FSO	F	3038	1	3	.	2	.	.	.	1	.	.	.	.	.	.	3	.	.	.	.	.
451	FSO	F	3038	1	4	1	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
452	FSO	F	3038	1	5	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	2	.	.
453	FSO	F	3038	1	6	4	1	3	.	.	2	.	.	.	.	.	.	.	.	.	.	.	.
454	FSO	F	3038	1	7	.	3	1	.	.	2	.	.	.	.	.	.	.	.	.	.	.	.
455	FSO	F	3038	2	1	.	.	3	.	.	2	.	.	.	.	.	.	1	.	.	.	.	.
456	FSO	F	3038	2	2	5	4	3	.	.	2	.	.	.	.	.	.	1	.	.	.	.	.
457	FSO	F	3038	2	3	.	.	.	.	.	2	.	.	.	.	.	.	1	.	.	.	.	.
458	FSO	F	3038	2	4	.	3	4	.	.	2	.	.	.	.	.	.	1	.	.	.	.	.
459	FSO	F	3038	3	1	.	1	2	.	.	3	.	.	.	.	.	.	.	.	.	.	.	.
460	FSO	F	3038	3	2	.	.	1	.	.	2	.	.	.	.	.	.	.	.	.	.	.	.
461	FSO	F	3038	3	3	.	.	1	.	.	2	.	.	.	.	.	.	.	.	.	.	.	.
462	FSO	F	3038	3	4	.	.	1	.	.	2	.	.	.	.	.	.	.	.	.	.	.	.
463	FSO	F	3038	4	1	.	.	1	.	.	3	.	.	.	.	.	.	2	.	.	.	.	.
464	FSO	F	3038	4	2	.	.	1	.	.	3	.	.	.	.	.	.	2	.	.	.	.	.
465	FSO	F	3038	4	3	.	.	2	.	.	1	.	.	.	.	.	.	3	.	.	.	.	.
466	FSO	F	3038	4	4	.	1	2	.	.	.	.	.	.	.	.	.	3	.	.	.	.	.
467	FSO	F	3038	4	5	.	.	1	.	.	3	.	.	.	.	.	.	2	.	.	.	.	.
468	FSO	F	3038	5	1	.	3	.	.	5	2	4	.	.	.	.	.	1	.	.	6	.	.
469	FSO	F	3038	5	2	.	.	.	.	4	2	3	.	.	.	.	.	1	.	.	.	.	.
470	FSO	F	3038	5	3	.	.	.	.	4	2	3	.	.	.	.	.	1	.	.	.	.	.
471	FSO	F	3038	5	4	.	.	.	.	4	2	3	.	.	.	.	.	1	.	.	.	.	.

Table 2 (cont)

						ELEMENTS																	
OBS	SITE	FILTER	CJDATE	STAGE	ANALYSIS	Al	Ca	Cl	Cr	Cu	Fe	K	Mg	Mn	Na	P	Pb	S	Si	Sn	Ti	V	Zn
472	FSO	F	3038	6	1	1	2	.	.	.	3	.	.	.	.	.	.	.	.	.	.	.	.
473	FSO	F	3038	6	2	1	.	.	.	.	3	.	2	.	.	.	.	.	.	.	.	.	.
474	FSO	F	3038	6	3	1	.	.	.	.	2	.	.	.	.	.	.	.	.	.	.	.	.
475	MCK	F	3038	1	1	.	.	1	.	2	.	.	.	.	.	4	.	3	.	.	.	.	.
476	MCK	F	3038	1	2	.	.	1	.	.	.	.	.	.	.	.	.	2	.	.	.	.	.
477	MCK	F	3038	1	3	.	.	1	.	.	.	.	.	.	.	.	.	2	.	.	.	.	.
478	MCK	F	3038	2	1	.	.	1	.	4	5	.	.	.	.	3	.	2	.	.	.	.	.
479	MCK	F	3038	2	2	.	.	1	.	4	5	.	.	.	.	3	.	2	.	.	.	.	.
480	MCK	F	3038	2	3	.	.	1	.	4	5	.	.	.	.	3	.	2	.	.	.	.	.
481	MCK	F	3038	3	1	.	.	1	.	4	.	.	3	.	.	.	.	2	.	.	.	.	.
482	MCK	F	3038	3	2	.	.	1	.	4	.	.	3	.	.	.	.	2	.	.	.	.	.
483	MCK	F	3038	3	3	6	.	1	.	4	.	.	3	.	.	5	.	2	.	.	.	.	.
484	MCK	F	3038	4	1	.	.	1	.	3	.	.	.	.	.	.	.	2	.	.	.	.	.
485	MCK	F	3038	4	2	.	.	1	.	3	.	.	.	.	.	.	.	2	.	.	.	.	.
486	MCK	F	3038	4	3	.	.	1	.	3	.	.	.	.	.	.	.	2	.	.	.	.	.
487	MCK	F	3038	5	1	.	.	1	.	3	.	.	.	.	.	4	.	2	.	.	.	.	.
488	MCK	F	3038	5	2	.	.	1	.	3	.	.	.	.	.	4	.	2	.	.	.	.	.
489	MCK	F	3038	5	3	.	.	1	.	3	5	.	.	.	4	.	.	2	.	.	.	.	.
490	MCK	F	3038	6	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
491	FCG	F	3041	1	1	.	1	3	.	.	2	.	.	.	.	.	.	.	.	.	.	.	.
492	FCG	F	3041	1	2	.	.	1	.	3	2	.	.	.	.	.	.	.	.	.	.	.	.
493	FCG	F	3041	1	3	4	.	2	.	.	1	3	.	.	.	.	.	.	.	.	.	.	.
494	FCG	F	3041	1	4	3	.	1	.	.	2	.	.	.	.	.	.	.	.	.	.	.	.
495	FCG	F	3041	2	1	.	.	1	.	4	3	.	.	.	.	.	.	2	.	.	.	.	.
496	FCG	F	3041	2	2	.	.	1	.	4	3	.	.	.	.	.	.	2	.	.	.	.	.
497	FCG	F	3041	2	3	.	.	1	.	4	3	.	.	.	.	5	.	2	.	.	.	.	.
498	FCG	F	3041	2	4	.	.	1	.	4	3	.	.	.	.	5	.	2	.	.	.	.	.
499	FCG	F	3041	3	1	.	.	1	.	4	3	.	.	.	.	.	.	2	.	.	.	.	.
500	FCG	F	3041	3	2	.	.	1	.	4	3	.	.	.	.	.	.	2	.	.	.	.	.
501	FCG	F	3041	4	1	.	5	1	.	4	3	7	.	.	.	.	.	2	.	.	6	.	.
502	FCG	F	3041	4	2	.	.	1	.	4	3	.	.	.	.	5	.	2	.	.	.	.	.
503	FCG	F	3041	5	1	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.
504	FCG	F	3041	5	2	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.
505	FCG	F	3041	5	3	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.
506	FCG	F	3041	6	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
507	FCG	F	3088	1	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
508	FCG	F	3088	2	1	.	.	1	.	3	4	.	.	.	5	.	.	2	.	.	.	.	.
509	FCG	F	3088	2	2	.	3	1	.	4	5	.	.	.	6	.	.	2	.	.	.	.	.
510	FCG	F	3088	2	3	.	3	1	.	4	5	.	.	.	6	.	.	2	.	.	.	.	.
511	FCG	F	3088	3	1	.	2	1	.	6	5	3	.	.	.	.	.	4	.	.	.	.	.
512	FCG	F	3088	3	2	.	3	1	.	6	5	7	.	.	4	.	.	2	.	.	.	.	.
513	FCG	F	3088	3	3	.	3	1	.	5	4	6	.	.	.	.	.	2	.	.	.	.	.
514	FCG	F	3088	4	1	.	3	1	.	6	5	4	.	.	.	.	.	2	.	.	.	.	.
515	FCG	F	3088	4	2	.	4	1	.	5	7	6	.	.	3	.	.	2	.	.	.	.	.
516	FCG	F	3088	4	3	.	4	1	.	.	.	.	.	.	3	.	.	2	.	.	.	.	.
517	FCG	F	3088	5	1	.	.	3	.	4	5	.	.	.	2	.	.	1	.	.	.	.	.
518	FCG	F	3088	5	2	.	6	3	.	4	5	.	.	.	2	.	.	1	.	.	.	.	.

Table 2 (cont)

OBS	SITE	FILTER	CJDATE	STAGE	ANALYSIS	Al	Ca	Cl	Cr	Cu	Fe	K	Mg	Mn	Na	P	Pb	S	Si	Sn	Ti	V	Zn
						ELEMENTS																	
519	FCG	F	3088	5	3	.	.	.	.	.	.	.	.	.	3	.	.	2	1	.	.	.	.
520	FCG	F	3088	5	4	.	.	.	.	4	5	3	.	.	2	.	.	1	.	.	.	.	.
521	FCG	F	3088	6	1	2	.	.	.	.	3	.	.	.	.	.	.	.	1	.	.	.	.
522	FCG	F	3088	6	2	2	.	.	.	.	3	.	.	.	.	.	.	.	1	.	.	.	.
523	FCG	F	3115	1	1	.	.	1	.	3	.	.	2	.	.	.	.	.	.	.	.	.	.
524	FCG	F	3115	1	2	.	.	2	.	3	.	.	1	.	.	.	.	.	.	.	.	.	.
525	FCG	F	3115	1	3	.	.	2	.	3	.	.	1	.	.	.	.	.	.	.	.	.	.
526	FCG	F	3115	2	1	.	.	1	.	4	5	.	.	.	.	3	.	2	.	.	.	.	.
527	FCG	F	3115	2	2	.	.	1	.	4	5	.	.	.	.	3	.	2	.	.	.	.	.
528	FCG	F	3115	2	3	.	.	1	.	4	5	.	.	.	.	3	.	2	.	.	.	.	.
529	FCG	F	3115	3	1	.	.	1	.	.	5	.	4	.	.	3	.	2	.	.	.	.	.
530	FCG	F	3115	3	2	.	.	1	.	4	5	.	6	.	.	3	.	2	.	.	.	.	.
531	FCG	F	3115	3	3	.	.	1	.	.	.	.	.	.	.	3	.	2	.	.	.	.	.
532	FCG	F	3115	4	1	.	.	1	.	.	3	.	.	.	.	.	.	2	.	.	.	.	.
533	FCG	F	3115	4	2	4	.	1	.	.	3	.	5	.	.	.	.	2	.	.	.	.	.
534	FCG	F	3115	4	3	.	.	1	.	4	3	.	.	.	.	.	.	2	.	.	.	.	.
535	FCG	F	3115	5	1	.	.	.	.	.	.	2	.	.	.	.	.	1	.	.	.	.	.
536	FCG	F	3115	5	2	.	.	.	.	.	.	2	.	.	.	.	.	1	.	.	.	.	.
537	FCG	F	3115	5	3	.	.	.	.	.	.	2	.	.	.	.	.	1	.	.	.	.	.
538	FCG	F	3118	1	1	.	.	2	.	.	.	.	.	.	3	1	.	4	.	.	.	.	.
539	FCG	F	3118	2	1	.	.	1	.	4	.	.	.	.	.	3	.	2	.	.	.	.	.
540	FCG	F	3118	2	2	.	5	1	.	3	.	.	.	.	.	4	.	2	.	.	.	.	.
541	FCG	F	3118	2	3	.	5	1	.	4	.	.	.	.	6	3	.	2	.	.	.	.	.
542	FCG	F	3118	3	1	.	3	4	.	.	.	6	.	.	2	7	.	5	1	.	.	.	.
543	FCG	F	3118	3	2	.	2	3	.	5	.	.	.	.	4	.	.	.	1	.	.	.	.
544	FCG	F	3118	3	3	.	2	4	.	5	.	3	.	.	.	.	.	.	1	.	.	.	.
545	FCG	F	3118	3	4	.	2	3	.	6	.	5	.	.	4	.	.	.	1	.	.	.	.
546	FCG	F	3118	3	5	.	2	.	.	5	.	.	.	.	4	.	.	3	1	.	.	.	.
547	FCG	F	3118	3	6	.	2	3	.	7	.	6	.	.	4	.	.	5	1	.	.	.	.
548	FCG	F	3118	3	7	.	2	3	.	7	.	6	.	.	5	.	.	4	1	.	.	.	.
549	FCG	F	3118	4	1	.	4	.	.	6	.	5	.	.	2	3	.	1	.	.	.	.	.
550	FCG	F	3118	4	2	.	1	.	.	6	.	5	.	.	3	4	.	2	.	.	.	.	.
551	FCG	F	3118	4	3	.	1	.	.	5	.	3	.	.	.	4	.	2	.	.	.	.	.
552	FCG	F	3118	4	4	.	2	.	.	3	.	.	.	.	.	.	.	1	.	.	.	.	.
553	FCG	F	3118	4	5	.	1	.	.	.	.	3	.	.	.	.	.	2	.	.	.	.	.
554	FCG	F	3118	5	1	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.
555	FCG	F	3118	5	2	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.
556	FCG	F	3118	5	3	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.
557	FCG	F	3118	5	4	.	.	.	.	.	.	.	.	.	2	.	.	1	.	.	.	.	.
558	FCG	F	3118	6	1	.	1	.	.	.	.	.	.	.	.	.	.	.	2	.	.	.	.
559	FCG	F	3118	6	2	1	3	4	.	.	.	5	.	.	.	.	.	2	.	.	.	.	.
560	FCG	F	3118	6	3	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.
561	FCG	F	3118	6	4	2	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.
562	FCG	F	3118	6	5	2	.	.	.	.	5	3	4	.	.	.	.	.	1	.	.	.	.
563	FCG	F	3118	6	6	2	5	.	.	.	.	.	4	.	3	.	.	.	1	.	.	.	.
564	FCG	F	3123	1	1	.	.	2	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.
565	FCG	F	3123	1	2	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.

Table 2 (cont)

OBS	SITE	FILTER	CJDATE	STAGE	ANALYSIS	Al	Ca	Cl	Cr	Cu	Fe	K	Mg	Mn	Na	P	Pb	S	Si	Sn	Ti	V	Zn
						ELEMENTS																	
566	FCG	F	3123	1	3	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.
567	FCG	F	3123	1	4	1	.	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
568	FCG	F	3123	1	5	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.
569	FCG	F	3123	1	6	2	.	.	.	.	.	.	.	.	.	3	.	1	.	.	.	.	.
570	FCG	F	3123	1	7	.	.	2	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.
571	FCG	F	3123	2	1	.	.	1	.	4	.	.	.	.	.	3	.	2	.	.	.	.	.
572	FCG	F	3123	2	2	.	.	.	.	2	1	.	.	3	.	.	.	4	.	.	.	.	.
573	FCG	F	3123	2	3	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.
574	FCG	F	3123	2	4	.	.	1	.	4	.	.	.	.	.	3	.	2	.	.	.	.	.
575	FCG	F	3123	2	5	.	.	1	.	2	.	.	.	.	.	3	.	4	.	.	.	.	.
576	FCG	F	3123	2	6	.	.	1	.	4	.	5	.	.	.	2	.	3	.	.	.	.	.
577	FCG	F	3123	2	7	1	.	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
578	FCG	F	3123	3	1	.	.	3	.	2	1	.	.	.	.	.	.	.	.	.	.	.	.
579	FCG	F	3123	3	2	.	.	.	.	1	.	.	.	.	.	.	.	3	.	.	.	.	2
580	FCG	F	3123	3	3	.	.	1	.	5	.	.	6	.	4	3	.	2	.	.	.	.	.
581	FCG	F	3123	3	4	.	.	1	.	5	.	.	6	.	4	3	.	2	.	.	.	.	.
582	FCG	F	3123	3	5	.	.	1	.	.	.	.	.	.	.	.	.	.	2	.	.	.	.
583	FCG	F	3123	3	6	.	3	1	.	.	.	2	.	.	.	5	.	4	.	.	.	.	.
584	FCG	F	3123	4	1	.	.	.	.	.	.	.	.	.	.	.	2	.	.	1	.	.	.
585	FCG	F	3123	4	2	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.
586	FCG	F	3123	4	3	.	.	4	.	5	.	.	3	.	2	.	.	1	.	.	.	.	.
587	FCG	F	3123	4	4	.	.	4	.	5	.	.	3	.	2	.	.	1	.	.	.	.	.
588	FCG	F	3123	4	5	.	.	4	.	3	.	.	5	.	2	.	.	1	.	.	.	.	.
589	FCG	F	3123	5	1	2	.	.	.	5	.	.	3	.	4	.	.	1	.	.	.	.	.
590	FCG	F	3123	5	2	2	.	.	.	5	.	.	3	.	4	.	.	1	.	.	.	.	.
591	FCG	F	3123	6	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
592	FCG	F	3172	1	1	.	1	2	.	3	.	.	.	.	.	.	.	.	.	.	.	.	.
593	FCG	F	3172	1	2	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
594	FCG	F	3172	1	3	.	.	1	.	3	2	.	.	.	.	.	.	.	.	.	.	.	.
595	FCG	F	3172	1	4	.	.	2	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.
596	FCG	F	3172	1	5	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
597	FCG	F	3172	1	6	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
598	FCG	F	3172	1	7	4	.	1	.	5	6	.	2	.	3	.	.	.	.	.	.	.	.
599	FCG	F	3172	2	1	.	.	1	.	4	5	.	.	.	.	3	.	2	.	.	.	.	.
600	FCG	F	3172	2	2	.	.	1	.	4	5	.	.	.	.	3	.	2	.	.	.	.	.
601	FCG	F	3172	2	3	.	.	1	.	4	5	.	.	.	.	3	.	2	.	.	.	.	.
602	FCG	F	3172	2	4	.	.	1	.	4	5	.	.	.	.	3	.	2	.	.	.	.	.
603	FCG	F	3172	2	5	.	.	1	.	4	5	.	.	.	.	3	.	2	.	.	.	.	.
604	FCG	F	3172	3	1	3	.	1	.	4	5	.	6	.	7	.	.	2	.	.	.	.	.
605	FCG	F	3172	3	2	2	.	1	.	5	4	.	.	.	.	.	.	3	.	.	.	.	.
606	FCG	F	3172	3	3	2	.	1	.	6	7	.	3	.	4	.	.	5	.	.	.	.	.
607	FCG	F	3172	3	4	3	.	1	.	5	4	.	.	.	.	.	.	2	.	.	.	.	.
608	FCG	F	3172	3	5	3	.	1	.	5	4	.	.	.	.	.	.	2	.	.	.	.	.
609	FCG	F	3172	4	1	4	.	2	.	5	3	.	.	.	.	.	.	1	.	.	.	.	.
610	FCG	F	3172	4	2	.	.	2	.	.	3	.	.	.	.	.	.	1	.	.	.	.	.
611	FCG	F	3172	4	3	.	.	2	.	.	3	.	.	.	.	.	.	1	.	.	.	.	.
612	FCG	F	3172	5	1	.	.	.	.	2	.	.	.	.	.	.	.	1	.	.	.	.	.

Table 2 (cont)

OBS	SITE	FILTER	CJDATE	STAGE	ANALYSIS	ELEMENTS Al	Ca	Cl	Cr	Cu	Fe	K	Mg	Mn	Na	P	Pb	S	Si	Sn	Ti	V	Zn
613	FCG	F	3172	5	2	.	.	.	.	3	2	.	.	.	.	.	.	1	.	.	.	.	.
614	FCG	F	3172	5	3	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.
615	FCG	F	3172	6	1	2	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.
616	FCG	F	3172	6	2	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.
617	FCG	F	3172	6	3	2	.	.	.	.	.	.	3	.	.	.	.	.	1	.	.	.	.
618	FSC	F	3192	1	1	3	.	1	.	.	.	.	.	.	.	.	.	2	.	.	.	.	.
619	FSC	F	3192	1	2	.	5	1	.	.	.	.	3	.	4	.	.	2	.	.	.	.	.
620	FSC	F	3192	1	3	.	5	1	.	.	.	.	3	.	4	.	.	2	.	.	.	.	.
621	FSC	F	3192	1	4	.	.	1	.	.	.	.	.	.	3	.	.	2	.	.	.	.	.
622	FSC	F	3192	1	5	.	.	1	.	.	.	.	2	.	.	.	.	3	.	.	.	.	.
623	FSC	F	3192	1	6	.	.	1	.	.	.	.	4	.	3	.	.	2	.	.	.	.	.
624	FSC	F	3192	2	1	.	.	1	.	.	.	.	.	.	.	.	.	2	.	.	.	.	.
625	FSC	F	3192	2	2	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
626	FSC	F	3192	2	3	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
627	FSC	F	3192	2	4	.	5	1	.	.	4	.	.	.	3	.	.	2	.	.	.	.	.
628	FSC	F	3192	2	5	.	3	1	.	.	.	.	.	.	.	.	.	2	.	.	.	.	.
629	FSC	F	3192	2	6	.	3	1	.	.	.	.	.	.	.	4	.	2	.	.	.	.	.
630	FSC	F	3192	2	7	3	.	1	.	.	5	.	4	.	.	.	.	2	.	.	.	.	.
631	FSC	F	3192	3	1	.	.	1	.	4	3	.	.	.	.	.	.	2	.	.	.	.	.
632	FSC	F	3192	3	2	.	.	1	.	.	2	.	.	.	.	.	.	3	.	.	.	.	.
633	FSC	F	3192	3	3	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
634	FSC	F	3192	3	4	.	.	1	.	.	2	.	.	.	.	.	.	3	.	.	.	.	.
635	FSC	F	3192	4	1	.	.	1	.	.	3	.	.	.	.	.	.	2	.	.	.	.	.
636	FSC	F	3192	4	2	.	.	1	.	.	3	.	.	.	.	.	.	2	.	.	.	.	.
637	FSC	F	3192	4	3	.	.	1	.	.	3	.	.	.	.	.	.	2	.	.	.	.	.
638	FSC	F	3192	4	4	.	.	1	.	.	3	.	.	.	.	.	.	2	.	.	.	.	.
639	FSC	F	3192	5	1	.	4	.	.	.	5	3	.	.	.	.	.	1	2	.	.	.	.
640	FSC	F	3192	5	2	.	.	.	.	.	.	.	.	.	.	.	.	1	2	.	.	.	.
641	FSC	F	3192	5	3	.	.	.	.	.	4	3	.	.	.	.	.	1	2	.	.	.	.
642	FSC	F	3192	5	4	.	2	.	.	.	.	.	.	.	.	.	.	1	3	.	.	.	.
643	FSC	F	3192	6	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
644	FSC	F	3192	6	2	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.
645	FSC	F	3192	6	3	4	2	.	.	.	.	.	.	.	.	.	.	3	1	.	.	.	.
646	FSO	F	3192	1	1	.	.	2	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.
647	FSO	F	3192	1	2	.	.	2	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.
648	FSO	F	3192	1	3	.	5	4	.	2	1	.	.	.	.	.	.	.	3	.	.	.	.
649	FSO	F	3192	1	4	.	.	4	.	.	1	.	5	.	.	.	.	.	3	.	2	.	.
650	FSO	F	3192	1	5	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
651	FSO	F	3192	1	6	.	.	1	.	.	2	.	.	.	.	.	.	.	.	.	.	.	.
652	FSO	F	3192	2	1	.	.	1	.	2	3	.	.	.	.	.	.	.	.	.	.	.	.
653	FSO	F	3192	2	2	.	.	1	.	2	3	.	.	.	.	.	.	4	.	.	.	.	.
654	FSO	F	3192	2	3	1	.	3	.	.	2	.	.	.	.	.	.	.	.	.	.	.	.
655	FSO	F	3192	2	4	1	.	2	.	.	3	.	.	.	.	.	.	.	.	.	.	.	.
656	FSO	F	3192	2	5	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
657	FSO	F	3192	2	6	.	.	2	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.
658	FSO	F	3192	3	1	.	.	1	.	2	3	.	.	.	.	.	.	.	.	.	.	.	.
659	FSO	F	3192	3	2	.	.	1	.	2	3	.	.	.	.	.	.	.	.	.	.	.	.

Table 2 (concluded)

OBS	SITE	FILTER	CJDATE	STAGE	ANALYSIS	Al	Ca	Cl	Cr	Cu	Fe	K	Mg	Mn	Na	P	Pb	S	Si	Sn	Ti	V	Zn
						ELEMENTS																	
660	FSO	F	3192	3	3	.	.	1	.	2	3	.	.	.	.	.	.	.	.	.	.	.	.
661	FSO	F	3192	4	1	.	.	2	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.
662	FSO	F	3192	4	2	.	.	2	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.
663	FSO	F	3192	4	3	.	.	2	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.
664	FSO	F	3192	5	1	.	.	.	.	4	3	.	.	.	.	2	.	1	.	.	.	.	.
665	FSO	F	3192	5	2	.	.	.	.	3	2	.	.	.	.	.	.	1	.	.	.	.	.
666	FSO	F	3192	6	1	.	2	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.
667	FSO	F	3192	6	2	.	2	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.
668	FSO	F	3192	6	3	.	2	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.
669	FSO	F	3192	6	4	.	1	.	.	.	2	.	.	.	.	.	.	.	3	.	.	.	.

SYMBOLS:

(.) : Element found absent.

(1,2 ..) : Elements found present. Number one is assigned to the element exhibiting the strongest peak in spectrum.

TABLE 3. LIST OF FUNGI OBSERVED, CASCADE IMPACTOR SAMPLERS

OBS	SITE	CJDATE	STAGE	ABB	ABG	ADY	ALT	ASP	ASS	ASW	CEP	CLA	CLD	CUR	FUL	FUM	GLI	GRA	HYA	MON	NIG	PAS	PEC	PES	PHM	RHN	RHZ	SPI	STE	STR	TIL	TRI	UNA	UND	UNE	UNH	UNI	UNK
1	FCG	2064	1	.	.	.	.	.	.	.	.	X	.	X	X	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.
2	FCG	2126	1	.	.	.	.	X	.	.	.	X	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.
3	FCG1	2203	1	.	.	.	.	X	.	.	X	X	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	FCG2	2203	1	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	FCG3	2204	1	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.
6	FCG4	2204	1	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.
7	MCK	2082	1	.	.	.	.	.	.	.	X	X	.	.	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.
8	MCK	2123	1	.	.	.	.	X	.	.	.	X	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.
9	MCK1	2160	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.
10	MCK2	2160	1	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.
11	MCK3	2161	1	.	.	.	.	X	.	.	.	X	.	.	.	.	X	.	.	.	.	.	.	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.
12	FSC	2124	1	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
13	FSC	2217	1	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
14	FSO	2125	1	.	.	.	.	X	.	.	.	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
15	FSO	2207	1	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
16	FSO	2217	1	.	.	.	X	.	.	.	X	X	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
17	ROD	2140	1	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	X	.	.	X	.	.	.	.	.	.
18	FCG	2363	1	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
19	FCG	3041	1	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
20	FSC	3025	1	.	.	.	X	.	.	.	.	.	.	X	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
21	FSC	3018	1	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
22	FSO	3018	1	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
23	FSO	3038	1	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
24	MCK	3025	1	.	.	.	X	.	.	.	.	X	.	X	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
25	MCK	3038	1	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.
26	FCG	3081	1	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
27	FCG	3087	1	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
28	FCG	3088	1	.	.	.	X	.	.	.	.	X	.	X	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
29	FCG	3095	1	.	.	.	X	.	.	.	.	X	.	.	.	.	.	.	.	X	X	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.
30	FCG	3096	1	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
31	FCG	3097	1	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
32	FCG	3101	1	.	.	.	.	X	.	.	.	X	.	X	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
33	FCG	3102	1	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.
34	FCG	3103	1	.	.	.	.	X	.	.	.	X	.	X	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.
35	FCG	3104	1	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
36	FCG	3108	1	.	.	.	.	.	.	.	X	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.
37	FCG	3110	1	.	.	.	X	.	.	.	.	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.
38	FCG	3111	1	.	.	.	.	X	.	.	X	X	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
39	FCG	3115	1	.	.	.	.	X	.	.	X	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
40	FCG	3116	1	.	.	.	.	X	.	.	.	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
41	FCG	3117	1	.	.	.	.	.	.	.	X	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
42	FCG	3118	1	.	.	.	.	.	.	.	X	X	.	X	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
43	FCG	3124	1	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.
44	FCG	3125	1	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Table 3 (cont)

OBS	SITE	CJDATE	STAGE	ABB	ABG	ADY	ALT	ASP	ASS	ASW	CEP	CLA	CLD	CUR	FUL	FUM	GLI	GRA	HYA	MON	NIG	PAS	PEC	PES	PHM	RHN	RHZ	SPI	STE	STR	TIL	TRI	UNA	UND	UNE	UNH	UNI	UNK
45	FCG	3130	1	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	X	.	X	X	.	.	.
46	FCG	3131	1	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.
47	FCG	3132	1	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.
48	FCG	3136	1	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
49	FCG	3137	1	.	.	.	X	.	.	.	.	X	.	X	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.
50	FCG	3138	1	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.
51	FCG	3139	1	.	.	.	X	.	.	.	.	X	.	X	.	.	.	.	.	X	X	.	.	.	.	.	.	.	X	.	.	.	.	X	X	.	.	.
52	FCG	3143	1	.	.	.	X	.	.	.	.	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	X	.	.	.	.	.	X	.	.	.
53	FCG	3144	1	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.	X	.	.	.	.	.	.	X	.	.	.	.
54	FCG	3145	1	.	.	.	X	.	.	.	.	X	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	X	.	.	.	.	X	.	.	.	.
55	FCG	3151	1	.	.	.	X	.	.	.	.	X	.	X	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
56	FCG	3152	1	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	X	.	.	.	.	X	.	.	X	.	.	.	.	.	X	.	.	.
57	FCG	3153	1	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	X	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.
58	FCG	3157	1	.	.	.	.	.	.	.	.	X	.	X	.	X	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.
59	FCG	3158	1	.	.	.	X	.	.	.	.	X	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	X	.	X	.	.	.	.
60	FCG	3159	1	.	.	.	X	.	.	.	.	X	.	X	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	X	.	X	X	.	.	.
61	FCG	3160	1	.	.	.	X	.	.	.	.	X	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	X	.	.	X	.	.	.
62	FCG	3164	1	.	.	.	.	.	.	.	.	.	.	X	.	X	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	X	.	X	X	.	.	.
63	FCG	3165	1	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.
64	FCG	3166	1	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	X	X	X	.	.
65	FCG	3167	1	.	.	.	X	.	.	.	.	X	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	X	.	.	.	.	X	X	.	.	.
66	FCG	3171	1	.	.	.	.	.	.	.	X	X	.	X	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.
67	FCG	3172	1	.	.	.	.	.	.	.	.	X	.	X	.	X	.	.	.	X	X	.	.	.	.	.	.	.	X	.	.	.	.	X	X	X	.	.
68	FSC	3192	1	.	.	.	.	.	.	.	X	X	.	X	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
69	FSO	3192	1	.	.	.	.	.	.	.	.	X	.	X	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	X	X	.	.	.
70	MCK	3193	1	.	.	.	.	.	.	.	X	X	.	X	.	.	.	.	.	.	X	.	.	X	.	.	.	.	X	.	.	.	.	.	.	.	.	.
71	FCG	2064	2	.	.	.	.	.	.	.	.	X	.	X	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.
72	FCG	2126	2	.	.	.	.	X	.	.	.	X	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
73	FCG1	2203	2	.	.	.	.	X	.	.	.	X	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
74	FCG2	2203	2	.	.	.	.	X	.	.	.	X	.	X	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.
75	FCG3	2204	2	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.
76	FCG4	2204	2	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
77	MCK	2082	2	.	.	.	.	X	.	.	X	X	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
78	MCK	2123	2	.	.	.	.	X	.	.	X	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.
79	MCK1	2160	2	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.
80	MCK2	2160	2	.	.	.	.	X	.	.	.	X	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.
81	MCK3	2161	2	.	.	.	.	.	.	.	.	X	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.
82	FSC	2124	2	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
83	FSC	2217	2	.	.	.	.	X	.	.	.	X	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
84	FSO	2125	2	.	.	.	.	X	.	.	.	X	.	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
85	FSO	2207	2	.	.	.	.	X	.	.	.	X	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.
86	FSO	2217	2	.	.	.	X	.	.	.	.	X	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
87	FCG	2363	2	.	.	.	.	X	.	.	.	X	.	.	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Table 3 (cont)

OBS	SITE	CJDATE	STAGE	ABB	ABG	ADY	ALT	ASP	ASS	ASW	CEP	CLA	CLD	CUR	FUL	FUM	GLI	GRA	HYA	MON	NIG	PAS	PEC	PES	PHM	RHN	RHZ	SPI	STE	STR	TIL	TRI	UNA	UND	UNE	UNH	UNI	UNK
88	FCG	3041	2	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
89	FSC	3025	2	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
90	FSC	3018	2	.	.	.	.	.	.	.	.	X	.	X	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.
91	FSO	3018	2	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
92	FSO	3038	2	.	.	.	.	X	.	.	.	X	.	X	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
93	MCK	3025	2	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
94	MCK	3038	2	.	.	.	.	X	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.
95	FCG	3081	2	.	.	.	X	.	.	.	.	.	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
96	FCG	3087	2	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
97	FCG	3088	2	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
98	FCG	3095	2	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
99	FCG	3096	2	.	.	.	.	X	.	.	.	X	.	X	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
100	FCG	3097	2	.	.	.	X	.	.	.	.	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
101	FCG	3101	2	.	.	.	.	.	.	.	.	X	X	.	.	.	.	.	.	X	.	.	.	.	.	.	.	X	.	.	.	.	X	.	.	.	.	.
102	FCG	3102	2	.	.	X	.	.	.	.	.	X	.	X	.	.	.	.	.	X	.	.	.	.	.	X	.	.	.	X	.	.	.	.	.	.	.	.
103	FCG	3103	2	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
104	FCG	3104	2	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.
105	FCG	3108	2	.	.	.	.	.	.	.	X	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.
106	FCG	3110	2	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.
107	FCG	3111	2	.	.	.	.	.	.	.	X	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.
108	FCG	3115	2	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.
109	FCG	3116	2	.	.	.	.	X	.	.	.	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
110	FCG	3117	2	.	.	.	.	X	.	.	X	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
111	FCG	3118	2	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
112	FCG	3124	2	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	X	.	.
113	FCG	3125	2	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.
114	FCG	3130	2	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	X	.	X	X	.	.	.
115	FCG	3131	2	.	.	.	.	.	.	.	.	X	X	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
116	FCG	3132	2	.	.	.	.	X	.	.	.	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
117	FCG	3136	2	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.
118	FCG	3137	2	.	.	.	.	X	.	.	.	X	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
119	FCG	3138	2	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.
120	FCG	3139	2	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.
121	FCG	3143	2	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
122	FCG	3144	2	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.
123	FCG	3145	2	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.
124	FCG	3151	2	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	X	.	X	X	.	.	.
125	FCG	3152	2	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	X	.	.	.	.	.	.	.	X	.	.	X	.	X	X	.	.	.
126	FCG	3153	2	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	X	.	.	X	.	X	X	.	.	.
127	FCG	3157	2	.	.	.	.	.	.	.	X	X	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	X	.	X	X	.	.	.
128	FCG	3158	2	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	X	.	X	X	.	.	.
129	FCG	3159	2	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	X	.	.	X	.	.	.	.	X	.	.	.	.	X	.	.	.	.
130	FCG	3160	2	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	X	.	X	.	.
131	FCG	3164	2	.	.	.	X	.	.	.	.	X	.	X	.	.	.	.	.	X	X	.	.	.	.	X	.	.	.	.	.	X	.	X	X	.	.	.

Table 3 (cont)

OBS	SITE	CJDATE	STAGE	ABB	ABG	ADY	ALT	ASP	ASS	ASW	CEP	CLA	CLD	CUR	FUL	FUM	GLI	GRA	HYA	MON	NIG	PAS	PEC	PES	PHM	RHN	RHZ	SPI	STE	STR	TIL	TRI	UNA	UND	UNE	UNH	UNI	UNK
132	FCG	3165	2	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	X	.	.	X	.	.	.
133	FCG	3166	2	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	X	.	.	X	X	.	.	.	.	X	X	.	.
134	FCG	3167	2	.	.	.	.	.	.	.	X	X	.	X	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	X	.	X	X	.	.	.
135	FCG	3171	2	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	X	.	X	X	X	.	.
136	FCG	3172	2	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	X	.	.	.	.	X	.	.	X	.	.	.	.	X	.	.	.	.
137	FSC	3192	2	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
138	FSO	3192	2	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	X	.	.	.	.	.	.
139	MCK	3193	2	.	.	X	.	.	.	.	X	X	.	X	.	.	.	.	.	.	X	.	.	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.
140	FCG	2064	3	.	.	.	.	.	.	.	.	X	.	X	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.
141	FCG	2126	3	.	.	.	.	X	.	.	.	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.
142	FCG1	2203	3	.	.	.	.	X	.	.	.	X	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
143	FCG2	2203	3	.	.	.	.	X	.	.	.	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
144	FCG3	2204	3	.	.	.	.	X	.	.	.	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.
145	FCG4	2204	3	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.
146	MCK	2082	3	.	.	.	.	X	.	.	.	X	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.
147	MCK	2123	3	.	.	.	.	X	.	.	.	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.
148	MCK1	2160	3	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.
149	MCK2	2160	3	.	.	.	.	X	.	.	.	X	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.
150	MCK3	2161	3	.	.	.	.	X	.	.	.	X	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.
151	FSC	2124	3	.	.	.	.	.	.	.	.	X	.	.	X	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
152	FSC	2217	3	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
153	FSO	2125	3	.	.	.	X	X	.	.	.	X	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
154	FSO	2207	3	.	.	.	.	X	.	.	X	X	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
155	FSO	2217	3	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.
156	ROD	2140	3	.	.	.	.	X	.	.	.	X	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
157	FCG	2363	3	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
158	FCG	3041	3	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
159	FSC	3025	3	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	.	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.
160	FSC	3018	3	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
161	FSO	3018	3	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
162	FSO	3038	3	.	.	.	.	X	.	.	.	X	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
163	MCK	3025	3	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
164	MCK	3038	3	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
165	FCG	3081	3	.	.	.	.	.	X	.	.	.	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
166	FCG	3087	3	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
167	FCG	3088	3	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
168	FCG	3095	3	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
169	FCG	3096	3	.	.	.	.	X	.	.	.	X	.	X	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
170	FCG	3097	3	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
171	FCG	3101	3	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	X	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.
172	FCG	3102	3	.	.	.	.	X	.	.	.	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	X	.	.	X	.	.	.	.	.
173	FCG	3103	3	.	.	.	.	X	.	.	.	X	.	X	.	.	.	.	.	X	X	.	.	.	.	.	.	X	.	.	.	.	X	.	.	.	.	.
174	FCG	3104	3	.	.	.	.	X	.	.	.	X	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
175	FCG	3108	3	.	.	.	.	X	.	X	X	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	X	.	.	X	.	.	.	.	.

Table 3 (cont)

OBS	SITE	CJDATE	STAGE	ABB	ABG	ADY	ALT	ASP	ASS	ASW	CEP	CLA	CLD	CUR	FUL	FUM	GLI	GRA	HYA	MON	NIG	PAS	PEC	PES	PHM	RHN	RHZ	SPI	STE	STR	TIL	TRI	UNA	UND	UNE	UNH	UNI	UNK
176	FCG	3110	3	.	.	.	.	X	.	.	.	X	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	X	X	.	.	.	.	.
177	FCG	3111	3	.	.	.	.	X	.	.	.	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.
178	FCG	3115	3	.	.	.	.	X	.	.	.	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.
179	FCG	3116	3	.	.	.	.	X	.	.	.	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
180	FCG	3117	3	.	.	.	.	X	.	.	.	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
181	FCG	3118	3	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
182	FCG	3124	3	.	.	.	.	.	.	.	X	X	.	.	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
183	FCG	3125	3	.	.	.	.	X	.	.	.	X	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
184	FCG	3130	3	.	.	.	.	X	.	.	.	X	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	X	.	X	.	.	X	.	.	.
185	FCG	3131	3	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.
186	FCG	3132	3	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
187	FCG	3136	3	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.
188	FCG	3137	3	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
189	FCG	3138	3	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	X	X	.	.	.	.	.	.	.	X	.	.	.	.	X	X	.	.	.
190	FCG	3139	3	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.
191	FCG	3143	3	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.
192	FCG	3144	3	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
193	FCG	3145	3	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	X	.	X	X	X	.	.
194	FCG	3151	3	.	.	.	.	X	.	.	.	X	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	X	.	.
195	FCG	3152	3	.	.	.	.	X	.	.	.	X	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.
196	FCG	3153	3	.	.	.	X	.	.	.	.	X	.	X	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	X	.	X	.	X	.	.
197	FCG	3157	3	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	X	.	.
198	FCG	3158	3	.	.	.	X	.	.	.	.	X	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	X	X	.	.	.
199	FCG	3159	3	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	.	.	X	X	.	.	.
200	FCG	3160	3	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.
201	FCG	3164	3	.	.	.	X	.	.	.	.	X	.	X	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	X	.	X	.	X	X	X	.	.
202	FCG	3165	3	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	X	X	.	.	.
203	FCG	3166	3	.	.	.	X	.	.	.	.	X	.	X	.	.	.	.	.	.	.	.	.	.	.	X	.	.	X	X	.	.	.	X	X	X	.	X
204	FCG	3167	3	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	X	.	.	.	.	X	.	.	X	.	.	X	.	X	X	.	.	.
205	FCG	3171	3	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	X	.	.	.	.	X	.	.	.	X	.	.	.	X	X	X	.	.
206	FCG	3172	3	.	.	.	X	.	.	.	.	.	.	X	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	X	.	.	X	.	.	.
207	FSC	3192	3	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
208	FSO	3192	3	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.
209	MCK	3193	3	.	.	.	.	X	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.
210	FCG	2064	4	.	.	.	.	.	.	.	.	.	.	X	X	.	.	.	X	X	X	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.
211	FCG	2126	4	.	.	.	X	X	.	.	.	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.
212	FCG1	2203	4	.	.	.	.	X	.	.	.	X	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
213	FCG2	2203	4	.	.	.	.	X	.	.	.	X	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.
214	FCG3	2204	4	.	.	.	.	X	.	.	.	X	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.
215	FCG4	2204	4	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
216	MCK	2082	4	.	.	.	X	X	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
217	MCK	2123	4	.	.	.	.	X	.	.	.	X	.	.	.	.	X	.	.	X	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.
218	MCK1	2160	4	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.
219	MCK2	2160	4	.	.	.	.	X	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.

Table 3 (cont)

OBS	SITE	CJDATE	STAGE	ABB	ABG	ADY	ALT	ASP	ASS	ASW	CEP	CLA	CLD	CUR	FUL	FUM	GLI	GRA	HYA	MON	NIG	PAS	PEC	PES	PHM	RHN	RHZ	SPI	STE	STR	TIL	TRI	UNA	UND	UNE	UNH	UNI	UNK
220	MCK3	2161	4	.	.	.	.	X	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.
221	FSC	2124	4	.	.	.	.	.	.	.	.	X	.	.	X	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.
222	FSC	2217	4	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
223	FSO	2125	4	.	.	.	.	X	.	.	.	X	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	X	.	.	X	.	.	.	.	.	.
224	FSO	2207	4	.	.	.	.	X	.	.	X	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.
225	FSO	2217	4	.	.	.	X	.	.	.	.	X	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
226	ROD	2140	4	.	.	.	.	X	.	.	.	X	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.
227	FCG	2363	4	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
228	FCG	3041	4	.	.	.	.	X	.	.	.	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
229	FSC	3025	4	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
230	FSC	3018	4	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
231	FSO	3018	4	.	.	.	.	.	.	.	.	X	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
232	FSO	3038	4	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
233	MCK	3025	4	.	.	.	.	X	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
234	MCK	3038	4	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
235	FCG	3081	4	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
236	FCG	3087	4	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
237	FCG	3088	4	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
238	FCG	3095	4	.	.	.	.	X	.	.	.	X	.	X	.	.	.	.	.	X	X	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.
239	FCG	3096	4	.	.	.	.	X	.	.	.	X	.	.	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
240	FCG	3097	4	.	.	.	.	X	.	.	.	X	.	X	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
241	FCG	3101	4	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.
242	FCG	3102	4	.	.	.	.	X	.	.	.	X	.	X	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	X	.	.	X	.	.	.	.	.
243	FCG	3103	4	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.
244	FCG	3104	4	.	.	.	.	X	.	.	.	X	.	.	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
245	FCG	3108	4	.	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.
246	FCG	3110	4	.	.	.	.	X	.	.	.	X	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.
247	FCG	3111	4	.	.	.	.	X	.	.	X	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.
248	FCG	3115	4	.	.	.	.	X	.	.	X	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
249	FCG	3116	4	.	X	.	.	.	.	.	.	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
250	FCG	3117	4	.	.	.	.	X	.	.	.	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
251	FCG	3118	4	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
252	FCG	3124	4	.	.	.	.	X	.	.	.	X	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
253	FCG	3125	4	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
254	FCG	3130	4	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.
255	FCG	3131	4	.	.	.	X	.	.	.	.	X	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.
256	FCG	3132	4	.	.	.	.	X	.	.	.	X	.	.	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.
257	FCG	3136	4	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	.	.	.	X	X	.	.
258	FCG	3137	4	.	.	.	.	X	.	.	.	X	.	X	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
259	FCG	3138	4	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
260	FCG	3139	4	.	.	.	X	X	.	.	.	X	.	X	.	.	.	.	.	X	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.
261	FCG	3143	4	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.	X	.	.
262	FCG	3144	4	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	.	.	.	X	X	.	.
263	FCG	3145	4	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.

Table 3 (cont)

OBS	SITE	CJDATE	STAGE	ABB	ABG	ADY	ALT	ASP	ASS	ASW	CEP	CLA	CLD	CUR	FUL	FUM	GLI	GRA	HYA	MON	NIG	PAS	PEC	PES	PHM	RHN	RHZ	SPI	STE	STR	TIL	TRI	UNA	UND	UNE	UNH	UNI	UNK
264	FCG	3151	4	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	.	.	X	X	.	.	.
265	FCG	3152	4	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
266	FCG	3153	4	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X	X	.	.	.
267	FCG	3157	4	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	X	.	X	X	.	.	.
268	FCG	3158	4	.	.	.	X	.	.	.	.	X	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	X	.	.	X	.	.	.	.	.	.
269	FCG	3159	4	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	.	.	.	.	.	X	.	.	.	.	.	X	.	X	X	.	.	.
270	FCG	3160	4	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	.	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.	X	.	.
271	FCG	3164	4	.	.	.	X	.	.	.	.	X	.	X	.	.	.	.	.	.	X	.	.	.	.	X	.	.	X	.	.	.	.	X	X	.	.	.
272	FCG	3165	4	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	.	X	.	.	.	.	.	.	.	X	.	.	.	.	X	X	.	.	.
273	FCG	3166	4	.	.	.	X	.	.	.	.	X	.	X	.	.	.	.	.	.	X	.	.	.	.	X	.	.	X	.	.	.	.	X	X	.	.	.
274	FCG	3167	4	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	.	.	.	.	.	X	.	.	X	.	.	.	.	X	X	X	.	.
275	FCG	3171	4	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	X	.	.	.	X	X	.	.	.
276	FCG	3172	4	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	X	.	.	.	.	X	X	.	.	.
277	FSC	3192	4	X	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	X	.	.	.	.	X	.	X	.	.	.	.	.	X	.	.	.	.
278	FSO	3192	4	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	X	X	.	.	.
279	MCK	3193	4	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.
280	FCG	2064	5	.	.	.	.	.	.	.	.	X	.	X	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.
281	FCG	2126	5	.	.	.	.	X	.	.	.	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.
282	FCG1	2203	5	.	.	.	.	X	.	.	.	X	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
283	FCG2	2203	5	.	.	.	.	X	.	.	.	X	.	.	X	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.
284	FCG3	2204	5	.	.	.	.	X	.	.	.	X	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	X	.	.	.	.	.	.
285	FCG4	2204	5	.	.	.	.	X	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
286	MCK	2082	5	.	.	.	.	X	.	.	.	X	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
287	MCK	2123	5	.	.	.	.	X	.	.	.	X	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
288	MCK1	2160	5	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.
289	MCK2	2160	5	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
290	MCK3	2161	5	.	.	.	.	X	.	.	.	X	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
291	FSC	2124	5	.	.	.	X	.	.	.	.	X	.	.	X	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
292	FSC	2217	5	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
293	FSO	2125	5	.	.	.	.	X	.	.	.	X	.	X	.	.	.	.	.	X	X	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.
294	FSO	2207	5	.	.	.	.	X	.	.	.	X	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
295	FSO	2217	5	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
296	ROD	2140	5	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.
297	FCG	2363	5	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
298	FCG	3041	5	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
299	FSC	3025	5	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
300	FSC	3018	5	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
301	FSO	3018	5	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
302	FSO	3038	5	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
303	MCK	3025	5	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.
304	MCK	3038	5	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
305	FCG	3081	5	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
306	FCG	3087	5	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
307	FCG	3088	5	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Table 3 (cont)

OBS	SITE	CJDATE	STAGE	ABB	ABG	ADY	ALT	ASP	ASS	ASW	CEP	CLA	CLD	CUR	FUL	FUM	GLI	GRA	HYA	MON	NIG	PAS	PEC	PES	PHM	RHN	RHZ	SPI	STE	STR	TIL	TRI	UNA	UND	UNE	UNH	UNI	UNK
308	FCG	3095	5	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.
309	FCG	3096	5	.	.	.	.	X	.	.	.	X	.	X	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
310	FCG	3097	5	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
311	FCG	3101	5	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	.	.	.
312	FCG	3102	5	.	.	.	.	X	.	.	.	X	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.
313	FCG	3103	5	.	.	.	.	X	.	.	X	X	.	X	.	.	.	.	.	X	.	.	.	.	.	X	.	.	.	X	.	.	.	.	.	.	.	.
314	FCG	3104	5	.	.	.	.	X	.	.	X	X	.	X	.	.	.	.	.	X	.	.	.	.	.	X	.	.	.	X	.	.	.	.	.	.	.	.
315	FCG	3108	5	.	.	.	.	.	.	.	X	X	.	.	.	.	X	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.
316	FCG	3110	5	.	.	.	.	X	.	.	X	X	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.
317	FCG	3111	5	.	.	.	.	X	.	.	.	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.
318	FCG	3115	5	.	.	.	.	X	.	.	.	X	.	.	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
319	FCG	3116	5	.	.	.	X	X	.	.	.	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
320	FCG	3117	5	.	.	.	.	X	.	.	.	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
321	FCG	3118	5	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
322	FCG	3124	5	.	.	.	.	.	.	.	X	X	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
323	FCG	3125	5	.	.	.	X	.	.	.	.	X	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
324	FCG	3130	5	.	.	.	.	X	.	.	X	X	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.
325	FCG	3131	5	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	X	X	.	.	.
326	FCG	3132	5	.	.	.	.	X	.	.	.	X	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	X	.	.	X	.	.	.
327	FCG	3136	5	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	X	.	X	X	X	.	.
328	FCG	3137	5	.	.	.	.	X	.	.	.	X	.	X	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	.	.	X	X	.	.	.
329	FCG	3138	5	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	X	.	.	X	.	.	.	.	X	.	.	.	.	.	X	.	.	.
330	FCG	3139	5	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.
331	FCG	3143	5	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	X	.	.	.	.	.	.	.	X	.	.	.	.	X	X	.	.	.
332	FCG	3144	5	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	X	.	X	X	X	.	.
333	FCG	3145	5	.	.	.	.	X	.	.	.	X	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.
334	FCG	3151	5	.	.	.	.	X	.	.	.	X	.	X	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	.	.	X	X	.	.	.
335	FCG	3152	5	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	X	.	.	.	.
336	FCG	3153	5	.	.	.	.	X	.	.	.	X	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	X	.	.	.	.
337	FCG	3157	5	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	.	X	.	.	.	.	X	.	.	X	.	.	.	.	X	X	.	.	.
338	FCG	3158	5	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.
339	FCG	3159	5	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	X	.	X	X	.	.	.
340	FCG	3160	5	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	.	X	.	.	.	.	.	.	.	X	.	.	.	.	X	X	X	.	.
341	FCG	3164	5	.	.	.	X	.	.	.	.	X	.	X	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	X	X	X	.	.
342	FCG	3165	5	.	.	.	.	X	.	.	.	.	.	X	.	.	.	.	.	.	X	.	.	.	.	X	.	.	.	.	.	.	.	X	X	.	.	.
343	FCG	3166	5	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	.	X	.	.	.	.	X	.	.	.	.	.	.	.	.	X	.	.	.
344	FCG	3167	5	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	.	.	.	X	.	.	.	.	X	.	.	.	.	X	X	.	.	.
345	FCG	3171	5	.	.	.	.	.	.	.	X	X	.	X	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.
346	FCG	3172	5	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	X	.	.	.	.	X	.	.	.	.	.	.	.	X	X	.	.	.
347	FSC	3192	5	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	X	X	.	.	.
348	FSO	3192	5	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.
349	MCK	3193	5	.	.	.	.	X	.	.	.	.	.	X	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.
350	FCG	2064	6	.	.	.	.	.	.	.	.	X	.	X	X	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.
351	FCG	2126	6	.	.	.	.	X	.	.	.	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.

Table 3 (cont)

OBS	SITE	CJDATE	STAGE	ABB	ABG	ADY	ALT	ASP	ASS	ASW	CEP	CLA	CLD	CUR	FUL	FUM	GLI	GRA	HYA	MON	NIG	PAS	PEC	PES	PHM	RHN	RHZ	SPI	STE	STR	TIL	TRI	UNA	UND	UNE	UNH	UNI	UNK
352	FCG1	2203	6	.	.	.	.	X	.	.	.	.	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
353	FCG2	2203	6	.	.	.	.	X	.	.	.	.	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
354	FCG3	2204	6	.	.	.	.	X	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
355	FCG4	2204	6	.	.	.	.	X	.	.	.	X	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
356	MCK	2082	6	.	.	.	.	X	.	.	X	X	.	X	X	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.
357	MCK	2123	6	.	.	.	.	X	.	.	.	X	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.
358	MCK1	2160	6	.	.	.	.	X	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.
359	MCK2	2160	6	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.
360	MCK3	2161	6	.	.	.	.	X	.	.	.	X	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.
361	FSC	2124	6	.	.	.	.	.	.	.	.	X	.	X	X	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
362	FSC	2217	6	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.
363	FSO	2125	6	.	.	.	X	X	.	.	.	X	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
364	FSO	2207	6	.	.	.	.	X	.	.	.	X	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.
365	FSO	2217	6	.	.	.	X	.	.	.	.	X	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
366	ROD	2140	6	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
367	FCG	2363	6	.	.	.	.	X	.	.	.	X	.	X	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
368	FCG	3041	6	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
369	FSC	3025	6	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
370	FSC	3018	6	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
371	FSO	3018	6	.	.	.	X	.	.	.	.	X	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
372	FSO	3038	6	.	.	.	.	.	.	.	.	X	X	X	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
373	MCK	3025	6	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	.	X	.	.	.	.	.	.	.	X	.	.	X	.	.	.	.	.	.
374	MCK	3038	6	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
375	FCG	3081	6	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
376	FCG	3087	6	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
377	FCG	3088	6	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
378	FCG	3095	6	.	.	.	.	X	.	.	.	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.
379	FCG	3096	6	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.
380	FCG	3097	6	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
381	FCG	3101	6	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
382	FCG	3102	6	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
383	FCG	3103	6	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
384	FCG	3104	6	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
385	FCG	3108	6	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.
386	FCG	3110	6	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
387	FCG	3111	6	.	.	.	.	X	.	.	.	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.
388	FCG	3115	6	.	.	.	.	X	.	.	X	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.
389	FCG	3116	6	.	.	.	.	X	.	.	.	X	.	X	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
390	FCG	3117	6	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
391	FCG	3118	6	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
392	FCG	3124	6	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.
393	FCG	3125	6	.	.	.	.	X	.	.	X	X	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.
394	FCG	3130	6	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.
395	FCG	3131	6	.	.	.	.	.	.	.	X	X	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.

Table 3 (cont)

OBS	SITE	CJDATE	STAGE	ABB	ABG	ADY	ALT	ASP	ASS	ASW	CEP	CLA	CLD	CUR	FUL	FUM	GLI	GRA	HYA	MON	NIG	PAS	PEC	PES	PHM	RHN	RHZ	SPI	STE	STR	TIL	TRI	UNA	UND	UNE	UNH	UNI	UNK
396	FCG	3132	6	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.
397	FCG	3136	6	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.
398	FCG	3137	6	.	.	.	X	.	.	.	.	X	.	X	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
399	FCG	3138	6	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.
400	FCG	3139	6	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.
401	FCG	3143	6	.	.	.	X	.	.	.	.	X	.	X	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.
402	FCG	3144	6	.	.	.	X	.	.	.	.	X	.	X	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.
403	FCG	3145	6	.	.	.	X	.	.	.	.	X	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	X	.	.	.	.	X	X	.	.	.
404	FCG	3151	6	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	X	.	.	.	.	X	.	.	.	.
405	FCG	3152	6	.	.	.	X	.	.	.	.	X	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	X	.	.	.	.	X	.	.	.	.
406	FCG	3153	6	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	X	.	.	.	.
407	FCG	3157	6	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.
408	FCG	3158	6	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	.	X	.	.	.	.	.	.	.	X	.	.	X	.	.	X	.	.	.
409	FCG	3159	6	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.
410	FCG	3160	6	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	.	X	.	.	X	.	.	.	.	X	.	.	.	.	X	X	.	.	.
411	FCG	3164	6	.	.	.	X	.	.	.	.	.	.	X	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	.	.	X	X	.	.	.
412	FCG	3165	6	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	X	.	.	.
413	FCG	3166	6	.	.	.	X	.	.	.	.	X	.	X	.	.	.	.	.	X	X	.	.	.	.	.	.	.	X	X	.	X	.	X	X	.	.	.
414	FCG	3167	6	.	.	.	.	.	.	.	X	.	.	X	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	X	.	X	X	.	.	.
415	FCG	3171	6	.	.	.	.	.	.	.	.	X	.	X	.	X	.	.	.	X	X	.	.	.	.	.	.	.	X	.	.	X	.	.	.	.	.	.
416	FCG	3172	6	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	.	.	X	X	.	.	.
417	FSC	3192	6	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	X	X	.	.	.
418	FSO	3192	6	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
419	MCK	3193	6	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	X	.	.	.	.	.	.
420	FCG	2064	6	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	X	.	.	X	.	.	.	.	.	.
421	FCG	2126	6	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
422	FSC	2123	6	.	.	.	X	.	.	.	.	X	.	.	X	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
423	MCK	2082	6	.	.	.	.	.	.	.	.	X	.	X	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
424	FSO	2125	6	.	.	.	.	X	.	.	.	X	.	X	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.
425	ROD	2140	6	.	.	.	.	X	.	.	.	X	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.

Table 3 (concluded)

FUNGI SYMBOLS:

ABB - Aspergillus sp., BLACK-BROWN CONIDIA
ABG - Aspergillus sp., BLACK-GREEN CONIDIA
ADY - Aspergillus sp., YELLOW CONIDIA
ALT - Alternaria sp.
ASP - Aspergillus sp., BROWN CONIDIA
ASS - Aspergillus sp., YELLOW-GREEN CONIDIA (SULPHUR)
ASW - Aspergillus sp., WHITE CONIDIA
CEP - Cephalosporium sp.
CLA - Cladosporium sp.
CUR - Curvularia sp.
FUM - Fusarium sp.
GLI - Gliocladium sp.
GRA - Graphium sp.
HYA - Hyalodendrum sp.
MON - Monilia sp.
NIG - Nigrospora sp.
PAS - Paecilomyces sp.
PEC - Penicillium sp.
PES - Pestalotia sp.
PHM - Phoma sp.
RHN - Rhinocladiella sp.
RHZ - Rhizopus sp.
SPI - Spicaria sp.
STE - Stemphyllium sp.
STR - Streptomyces sp.
TIL - Tilachlidium sp.
TRI - Trichoderma sp.
CLD, FUL, UNA, UND, UNE, UNH, UNI, and UNK - (Unknowns, see Appendix B for their descriptions).

TABLE 4. LIST OF FUNGI OBSERVED, MEMBRANE FILTERS

OBS	SITE	SAMPLE #	TIME (min)	CJDATE	ABB	ABG	ADY	ALT	ASB	ASP	ASW	AUR	CEP	CLA	CLD	COL	CUR	FUL	FUM	GLI	GRA	HYA	MON	NIG	PEC	PES	PHA	PHM	PYR	RHN	RHZ	STE	TOR	TRI	UNB	UNC	UND	UNL
1	FCG	1	5	2126	.	.	.	.	.	.	.	.	.	X	.	.	X	.	.	.	.	.	X	.	X	.	.	X	.	.	.	.	.	.	.	.	.	.
2	MCK	1	5	2123	.	.	.	.	.	X	.	.	.	X	.	.	X	.	.	.	.	X	.	X	X	.	X	X	X	.	.	X	X	X	.	.	.	.
3	MCK	1	5	2125	.	.	.	.	.	.	.	.	.	X	.	.	X	.	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	.	.	.
4	FSC	1	5	2123	.	.	.	.	.	.	.	.	.	X	.	.	X	.	X	.	.	.	.	X	X	.	.	X	.	.	.	X	.	.	.	.	.	.
5	FSC	1	5	2125	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	X	X	.	.	.	.	.	.	X	.	.	.	.	.	.
6	ROD	1	5	2140	.	.	.	.	.	.	.	.	.	X	.	.	X	.	.	.	.	.	.	.	.	.	.	X	.	X	X	.	.	X	.	.	.	.
7	MCK	1	5	2160	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	.	.
8	MCK	2	5	2160	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.
9	MCK	3	5	2160	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.
10	MCK	4	5	2160	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	X	.	.	.	.
11	MCK	5	5	2160	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	X	.	.	.	.
12	MCK	6	5	2160	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X	X	.	.	.	.	.	.	.	X	.	.	.	.
13	MCK	7	5	2160	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	.	.	.	.	.	X	.	.	X	.	.	.	.	.	.	.	.	.	.
14	MCK	8	5	2160	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	X	X	.	X	.	.	.	.	.	X	.	.	.	.
15	MCK	9	5	2160	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.
16	MCK	10	5	2160	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	X	.	.	.	.	.	X	.	.	.	.
17	MCK	1	5	2161	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X	X	.	X	.	.	.	.	.	X	.	.	.	.
18	MCK	2	5	2161	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.
19	MCK	3	5	2161	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	.	.	X	.	.	.	.
20	MCK	4	5	2161	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	.	.	.	.	.
21	MCK	5	5	2161	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	.	.	.	.	.
22	MCK	6	5	2161	.	.	.	.	.	.	.	.	.	X	.	.	X	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
23	FCG	1	5	2203	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	X	.	.	X	.	.	.	.	.	.	.	.	.	.
24	FCG	2	5	2203	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.
25	FCG	3	5	2203	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	X
26	FCG	4	5	2203	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	X	.	.	.	X	.	X
27	FCG	5	5	2203	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.
28	FCG	6	5	2203	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	X
29	FCG	7	5	2203	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	X	.	.	.	.	.	.	.	.	.	.
30	FCG	8	5	2203	.	.	.	.	.	X	.	.	.	X	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.
31	FCG	9	5	2203	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.
32	FCG	10	5	2203	.	.	.	.	.	.	.	.	.	X	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.
33	FCG	11	5	2203	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.
34	FCG	12	5	2203	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.
35	FCG	1	5	2204	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.
36	FCG	2	5	2204	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	X	.	.	.	.	.	.
37	FCG	3	5	2204	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	X	.	.	.	.
38	FCG	4	5	2204	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.
39	FCG	5	5	2204	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.
40	FCG	6	5	2204	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	X	.	.	.	.	.	.	.	.	.	.
41	FCG	7	5	2204	.	.	.	.	.	X	.	.	.	X	.	.	.	.	.	.	.	.	.	X	X	.	.	X	.	.	.	X	.	.	.	.	.	.
42	FCG	8	5	2204	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.

Table 4 (cont)

OBS	SITE	SAMPLE #	TIME (min)	CJDATE	ABB	ABG	ADY	ALT	ASB	ASP	ASW	AUR	CEP	CLA	CLD	COL	CUR	FUL	FUM	GLI	GRA	HYA	MON	NIG	PEC	PES	PHA	PHM	PYR	RHN	RHZ	STE	TOR	TRI	UNB	UNC	UND	UNL
43	FCG	9	5	2204	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	X	.	.	.	.	.	.	.	.	.	.
44	FCG	10	5	2204	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	X	.	.	.	.	.	.
45	FCG	11	5	2204	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X	X	.	.	.	X	.	.	.	.	.	.	.	.	.	.
46	FCG	12	5	2204	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	X	.	.	.	.	.	.	.	.	.	.
47	FCG	1	5	3082	.	.	.	.	.	X	.	.	.	X	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.
48	FCG	2	5	3082	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	X	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.
49	FCG	1	5	3087	.	.	.	.	.	.	.	.	.	X	.	.	X	.	X	.	.	.	X	.	X	.	.	X	.	.	.	.	.	.	.	.	.	.
50	FCG	2	5	3087	.	.	.	.	.	.	.	.	.	X	.	.	X	.	.	.	.	.	X	X	X	.	.	X	.	.	.	.	.	.	.	.	.	.
51	FCG	1	5	3088	.	.	.	.	.	.	.	.	.	X	.	.	X	.	.	.	X	.	X	X	.	.	.	X	.	.	.	.	.	.	.	.	.	.
52	FCG	2	5	3088	.	.	.	.	.	.	.	.	.	X	.	.	X	.	.	.	.	.	X	X	X	.	.	X	.	.	.	.	.	.	.	.	.	.
53	FCG	1	5	3089	.	.	.	.	.	.	.	.	.	X	.	.	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.
54	FCG	2	5	3089	.	.	.	.	.	.	.	.	.	X	.	.	X	.	.	.	.	.	X	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.
55	FCG	1	5	3090	.	.	.	.	.	.	.	.	.	X	.	.	X	.	.	.	.	.	X	X	X	.	.	.	.	.	.	.	.	.	.	.	.	.
56	FCG	2	5	3090	.	.	.	.	.	.	.	.	.	X	.	.	X	.	.	.	.	.	X	X	X	.	.	.	.	.	.	.	.	.	.	.	.	.
57	FCG	1	5	3095	.	.	.	.	.	.	.	.	.	X	.	.	X	.	.	.	.	.	X	X	X	.	.	.	.	.	.	.	.	.	.	.	.	.
58	FCG	2	5	3095	.	.	.	.	.	.	.	.	.	X	.	.	X	.	.	.	.	.	X	X	X	.	.	X	.	.	.	.	.	.	.	.	.	.
59	FCG	1	5	3096	.	.	.	.	.	.	.	.	.	X	.	.	X	.	.	.	.	.	X	X	.	.	.	X	.	.	.	X	.	.	.	.	.	.
60	FCG	2	5	3096	.	.	.	.	.	.	.	.	.	X	.	.	X	.	.	.	.	.	X	X	X	.	.	.	.	.	.	.	.	.	.	.	.	.
61	FCG	1	2	3097	.	.	.	.	.	.	X	.	X	X	.	.	X	.	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	.	.	.
62	FCG	2	2	3097	.	.	.	.	.	.	.	.	.	X	.	.	X	.	.	.	.	.	X	X	X	.	.	.	.	.	.	.	.	.	.	.	.	.
63	FCG	1	5	3097	.	X	.	.	.	.	.	.	.	X	.	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
64	FCG	2	5	3097	.	.	.	.	.	.	.	.	.	X	.	.	X	.	.	.	.	.	X	X	.	.	.	X	.	.	.	.	.	.	.	.	.	.
65	FCG	1	1	3098	.	.	.	.	.	.	.	.	.	X	.	.	X	.	.	.	.	.	.	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.
66	FCG	2	1	3098	.	.	.	.	.	.	.	.	.	X	.	.	X	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.
67	FCG	1	2	3098	.	.	.	.	.	X	.	.	.	X	.	.	X	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.
68	FCG	2	2	3098	.	.	.	.	.	.	.	.	.	X	.	.	X	.	.	.	.	.	X	X	X	.	.	X	.	.	.	.	.	.	.	.	.	.
69	FCG	1	5	3098	.	.	.	.	.	.	.	.	.	X	.	.	X	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.
70	FCG	2	5	3098	.	.	.	.	.	.	.	.	.	X	.	.	X	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.
71	FCG	1	5	3101	.	.	.	.	.	.	.	.	.	X	.	.	X	.	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	.	.	.
72	FCG	2	5	3101	.	.	.	.	.	.	.	.	.	X	.	.	X	.	.	.	.	.	X	.	X	.	.	X	.	.	.	.	.	.	.	.	.	.
73	FCG	1	5	3102	.	.	X	.	.	.	.	.	.	X	.	.	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.
74	FCG	2	5	3102	.	.	.	.	.	.	.	.	.	X	.	.	X	.	.	.	.	.	X	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.
75	FCG	1	5	3103	.	.	.	.	.	.	.	.	.	X	.	.	X	.	.	.	.	.	X	X	X	.	.	X	.	.	.	.	.	.	.	.	.	.
76	FCG	2	5	3103	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	X	.	X	.	.	X	.	.	.	.	.	.	.	.	.	.
77	FCG	1	5	3104	.	.	.	X	.	.	.	.	.	X	.	.	X	.	.	.	.	.	X	.	X	.	.	.	.	.	.	X	.	.	.	.	.	.
78	FCG	2	5	3104	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	X	.	X	.	.	X	.	.	.	.	.	.	.	.	.	.
79	FCG	1	5	3105	.	.	.	.	.	.	.	.	.	X	X	.	X	.	.	.	.	.	X	X	X	.	.	.	.	.	.	X	.	.	.	.	.	.
80	FCG	2	5	3105	.	.	.	.	.	.	.	.	.	X	.	.	X	.	.	.	.	.	X	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.
81	FCG	1	5	3108	.	.	.	.	.	.	.	.	.	X	X	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.
82	FCG	2	5	3108	.	.	.	.	X	.	.	.	.	X	.	.	X	.	.	.	.	.	X	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.
83	FCG	1	5	3110	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.
84	FCG	2	5	3110	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	.	.	.

Table 4 (cont)

OBS	SITE	# SAMPLE	TIME (min)	CJDATE	ABB	ABG	ADY	ALT	ASB	ASP	ASW	AUR	CEP	CLA	CLD	COL	CUR	FUL	FUM	GLI	GRA	HYA	MON	NIG	PEC	PES	PHA	PHM	PYR	RHN	RHZ	STE	TOR	TRI	UNB	UNC	UND	UNL
85	FCG	1	5	3111	.	.	.	.	.	.	.	.	.	X	.	.	X	.	.	.	.	.	X	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.
86	FCG	2	5	3111	.	.	.	.	X	.	.	.	.	X	.	.	X	.	.	.	.	.	X	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.
87	FCG	1	5	3112	.	.	.	.	X	.	.	.	.	X	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
88	FCG	2	5	3112	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	X	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.
89	FCG	1	5	3115	.	.	.	.	X	X	.	.	.	X	.	.	.	.	.	.	.	.	X	.	X	.	.	X	.	.	.	.	.	.	.	.	.	.
90	FCG	2	5	3115	.	.	.	.	X	X	.	.	.	X	.	.	.	.	.	.	.	.	X	.	X	.	.	X	.	.	.	.	.	.	.	.	.	.
91	FCG	1	5	3116	.	.	.	.	X	X	.	.	.	X	.	.	.	.	.	.	.	.	X	.	X	.	.	X	.	.	.	.	.	.	.	.	.	.
92	FCG	2	5	3116	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.
93	FCG	1	5	3119	.	.	.	.	X	.	.	.	.	X	.	.	.	.	.	.	.	.	X	.	X	.	.	X	.	.	.	.	.	.	.	.	.	.
94	FCG	2	5	3119	.	.	.	.	.	X	.	.	.	X	.	.	.	.	.	.	.	.	X	.	X	.	.	X	.	.	.	.	.	.	.	.	.	.
95	FCG	1	5	3124	.	.	.	.	.	.	.	.	.	X	.	.	X	.	.	.	.	.	X	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.
96	FCG	2	5	3124	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
97	FCG	1	5	3125	X	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.
98	FCG	2	5	3125	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	X	X	X	.	.	.	.	.	.	.	.	X	.	.	.	.
99	FCG	1	5	3130	.	.	.	.	.	.	.	.	.	X	.	.	X	.	X	.	.	.	.	X	X	.	.	.	.	X	X	X	.	.	.	.	.	.
100	FCG	2	5	3130	.	.	.	.	.	.	.	.	.	X	.	.	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	X	.	.	.	.
101	FCG	1	5	3131	.	.	.	.	.	.	.	.	.	X	.	.	X	.	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	.	.	.
102	FCG	2	5	3131	.	.	.	.	.	.	.	.	.	X	.	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
103	FCG	1	5	3132	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	X	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.
104	FCG	2	5	3132	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	X	.	.	.	.
105	FCG	1	5	3133	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	X	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.
106	FCG	2	5	3133	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	X	.	.	X	.	.	.	X	.	.	.	.	.	.
107	FCG	1	5	3136	.	.	.	.	.	.	.	.	.	X	.	.	X	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.
108	FCG	2	5	3136	.	.	.	.	.	.	.	.	X	X	.	.	X	.	.	.	.	.	X	.	.	.	.	.	.	X	X	.	.	.	.	.	.	.
109	FCG	1	5	3138	.	.	.	.	.	.	.	.	.	X	.	.	X	.	.	.	.	.	.	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.
110	FCG	2	5	3138	.	.	.	.	.	.	.	.	.	X	.	.	X	.	.	.	.	.	X	X	.	.	.	X	.	.	.	X	.	.	.	.	.	.
111	FCG	1	5	3139	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	X	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.
112	FCG	2	5	3139	.	.	.	.	.	.	.	.	.	X	.	.	X	.	X	.	.	.	X	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.
113	FCG	1	5	3140	.	.	.	.	.	X	.	.	.	X	.	.	.	.	.	.	.	.	.	X	X	.	.	X	.	.	.	.	.	.	.	.	.	.
114	FCG	2	5	3140	.	.	.	.	.	X	.	.	.	X	.	.	X	.	X	.	.	.	X	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.
115	FCG	1	5	3144	.	.	.	.	.	X	.	.	.	X	.	.	X	.	.	.	.	.	.	X	X	.	.	.	.	.	.	X	.	.	.	.	.	.
116	FCG	2	5	3144	.	.	.	.	.	X	.	.	.	X	.	.	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.
117	FCG	1	5	3146	.	.	.	.	.	X	.	.	.	X	.	.	X	.	.	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	.	.
118	FCG	2	5	3146	.	.	.	.	.	X	.	.	.	X	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	X	.	.
119	FCG	1	5	3147	.	.	.	.	.	.	.	.	.	X	.	.	X	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	X	.	.	X	.
120	FCG	1	5	3152	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.
121	FCG	2	5	3152	.	.	.	.	.	.	.	.	.	X	.	X	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.	X	.	.	.	.	.	.
122	FCG	1	5	3153	.	.	.	.	.	.	.	.	.	X	.	.	X	.	.	.	.	.	.	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.
123	FCG	2	5	3153	.	.	.	.	.	.	.	.	.	X	.	.	X	.	.	.	.	.	.	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.
124	FCG	1	5	3154	.	.	.	.	.	.	.	.	.	X	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.
125	FCG	2	5	3154	.	.	.	.	.	.	.	.	.	X	.	.	X	.	X	.	.	.	.	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.
126	FCG	1	5	3158	.	.	.	.	.	.	.	.	.	X	.	X	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Table 4 (concluded)

OBS	SITE	# SAMPLE	TIME (min)	CJDATE	ABB	ABG	ADY	ALT	ASB	ASP	ASW	AUR	CEP	CLA	CLD	COL	CUR	FUL	FUM	GLI	GRA	HYA	MON	NIG	PEC	PES	PHA	PHM	PYR	RHN	RHZ	STE	TOR	TRI	UNB	UNC	UND	UNL
127	FCG	2	5	3158	.	.	.	.	.	.	.	.	.	X	.	.	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.	X	.	.	.	.	.	.
128	FCG	1	5	3159	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.	X	.	.	.	.	.	.
129	FCG	2	5	3159	.	.	.	.	.	.	.	.	.	X	.	.	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.
130	FCG	1	5	3160	.	.	.	.	.	X	.	.	.	X	.	.	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.
131	FCG	2	5	3160	.	.	.	.	.	.	.	.	.	X	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
132	FCG	1	5	3164	.	.	.	.	.	.	.	.	.	X	.	.	X	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	X	X	.	.
133	FCG	2	5	3164	.	.	.	.	.	X	.	.	.	X	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X	X	.	.
134	FCG	1	5	3165	.	.	.	.	.	.	.	.	.	X	.	.	X	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	X	.	.	.
135	FCG	2	5	3165	.	.	.	.	.	.	.	.	.	X	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.

FUNGI SYMBOLS:

ABB - Aspergillus sp., BLACK-BROWN CONIDIA
ABG - Aspergillus sp., BLACK-GREEN CONIDIA
ADY - Aspergillus sp., YELLOW CONIDIA
ALT - Alternaria sp.
ASB - Aspergillus sp., BLACK CONIDIA
ASP - Aspergillus sp., BROWN CONIDIA
ASW - Aspergillus sp., WHITE CONIDIA
AUR - Aureobasidium sp.
CEP - Cephalosporium sp.
CLA - Cladosporium sp.
COL - Colletotrichum sp.
CUR - Curvularia sp.
FUM - Fusarium sp.
GLI - Gliocladium sp.
GRA - Graphium sp.
HYA - Hyalodendrum sp.
MON - Monilia sp.
NIG - Nigrospora sp.
PEC - Penicillium sp.
PES - Pestalotia sp.
PHA - Phaeotrichoconis sp.
PHM - Phoma sp.
PYR - Pyrenochaeta sp.
RHN - Rhinocladiella sp.
RHZ - Rhizopus sp.
STE - Stemphyllium sp.
TOR - Torula sp.
TRI - Trichoderma sp.
CLD, FUL, UNB, UNC, UND, and UNL - (Unknowns, see Appendix B for their descriptions).

TABLE 5. LIST OF FUNGI OBSERVED, DIRECT EXPOSURE OF CULTURE PLATES

OBS	SITE	SAMPLE	TIME (min)	CJDATE	ABB	ABG	ADY	ASP	CEP	CLA	CUR	FUL	FUM	HYA	MON	NIG	PAS	PEC	PES	PHM	RHN	SPI	STE	STR	UNH	UNI	UNJ	UNK
1	FCG	1	11	3088	X	X	.	.	.	X	X	.	X	.	X	.	.	X	.	X	.	.	.	.	.	.	.	.
2	FCG	2	11	3088	X	X	.	.	.	X	.	.	X	.	X	.	.	X	.	.	.	.	.	.	.	.	.	.
3	FCG	3	11	3088	X	X	.	.	.	X	.	.	X	.	X	.	.	X	.	.	.	.	.	.	.	.	.	.
4	FCG	4	1440	3088	.	.	.	X	X	X	X	.	X	.	X	X	X	X	.	.	.	.	.	.	X	.	.	.
5	FCG	5	1440	3088	.	X	.	X	X	X	X	X	.	.	X	.	.	X	.	X	.	.	.	.	.	.	.	.
6	FCG	6	1440	3088	.	X	.	.	X	X	X	X	.	.	X	.	.	X	.	.	.	X	.	.	.	X	.	.
7	FCG	1	2	3097	.	.	.	X	X	X	X	.	.	X	.	X	.	X	.	.	.	.	.	.	.	.	X	.
8	FCG	2	2	3097	.	.	.	.	.	X	X	.	X	.	.	X	X	X	.	.	.	X	.	.	.	.	.	.
9	FCG	3	4	3097	.	.	.	X	X	X	X	.	X	.	.	X	.	X	.	.	.	.	X	.	.	.	.	.
10	FCG	4	4	3097	.	.	.	X	X	X	X	.	X	.	.	X	.	.	X	.	.	.	.	.	.	.	.	.
11	FCG	5	8	3097	.	.	.	.	X	X	X	.	X	.	X	X	.	X	.	.	.	.	.	.	.	.	X	.
12	FCG	5	8	3097	.	.	.	.	X	X	X	.	X	.	X	X	X	.	.	.	.	.	.	.	.	.	X	.
13	FCG	1	1	3098	.	.	.	.	X	X	X	.	X	.	X	X	X	.	.	.	.	.	.	.	.	.	.	.
14	FCG	2	1	3098	.	.	.	X	.	X	X	.	X	.	X	X	.	.	.	.	.	.	X	.	.	.	.	.
15	FCG	3	2	3098	.	.	X	.	X	X	X	.	X	.	.	X	X	.	.	.	.	.	.	.	.	.	.	.
16	FCG	4	2	3098	.	.	.	.	X	X	X	.	X	.	.	X	X	.	.	.	.	.	.	.	.	.	.	.
17	FCG	5	5	3098	.	.	.	.	X	X	X	.	X	.	.	.	.	X	.	X	.	.	.	.	.	.	.	.
18	FCG	6	5	3098	.	.	.	.	X	X	X	.	X	.	X	X	.	.	.	.	.	.	.	.	.	.	.	.
19	FCG	1	1	3110	.	.	.	.	.	X	X	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
20	CTR	1	0	3110	.	.	.	.	.	X	.	.	X	.	X	.	.	.	.	X	.	X	.	.	.	.	.	.
21	FCG	1	1	3112	.	.	.	.	.	X	.	.	.	.	.	.	.	X	.	.	.	.	.	X	.	.	.	.
22	CTR	1	0	3112	.	.	.	.	.	.	.	.	.	.	X	.	.	X	.	.	.	X	.	.	.	.	.	.
23	CTR	1	1	3108	.	.	.	.	.	X	.	.	.	.	X	.	.	X	.	.	.	.	.	.	.	.	.	.
24	CTR	2	1	3108	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	X	.	.	.	.	.	.	.	.
25	CTR	3	1	3108	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.
26	CTR	4	1	3108	.	.	.	.	.	X	.	.	.	.	X	.	.	X	.	.	.	.	.	X	.	.	.	.
27	CTR	5	1	3108	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	X	.	.	.	.	.	.	.	.
28	CTR	6	1	3108	.	.	.	.	.	X	.	.	.	.	X	.	.	X	.	.	.	.	.	.	.	.	.	X
29	CTR	7	1	3108	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	X	.	.	X	.	.	.	.
30	CTR	8	1	3108	.	.	X	.	.	.	.	.	.	.	X	.	.	X	.	X	.	.	.	.	.	.	.	.

FUNGI SYMBOLS:

ABB - Aspergillus sp., BLACK-BROWN CONIDIA
ABG - Aspergillus sp., BLACK-GREEN CONIDIA
ADY - Aspergillus sp., YELLOW CONIDIA
ASP - Aspergillus sp., BROWN CONIDIA
CEP - Cephalosporium sp.
CLA - Cladosporium sp.
CUR - Curvularia sp.
FUM - Fusarium sp.
HYA - Hyalodendrum sp.
MON - Monilia sp.
NIG - Nigrospora sp.
PAS - Paecilomyces sp.
PEC - Penicillium sp.
PES - Pestalotia sp.
PHM - Phoma sp.
RHN - Rhinocladiella sp.
SPI - Spicaria sp.
STE - Stemphyllium sp.
STR - Streptomyces sp.
FUL, UNH, UNI, UNJ and UNK - (Unknowns, see Appendix B for their descriptions).

APPENDIX B. DESCRIPTION OF UNKNOWN FUNGI

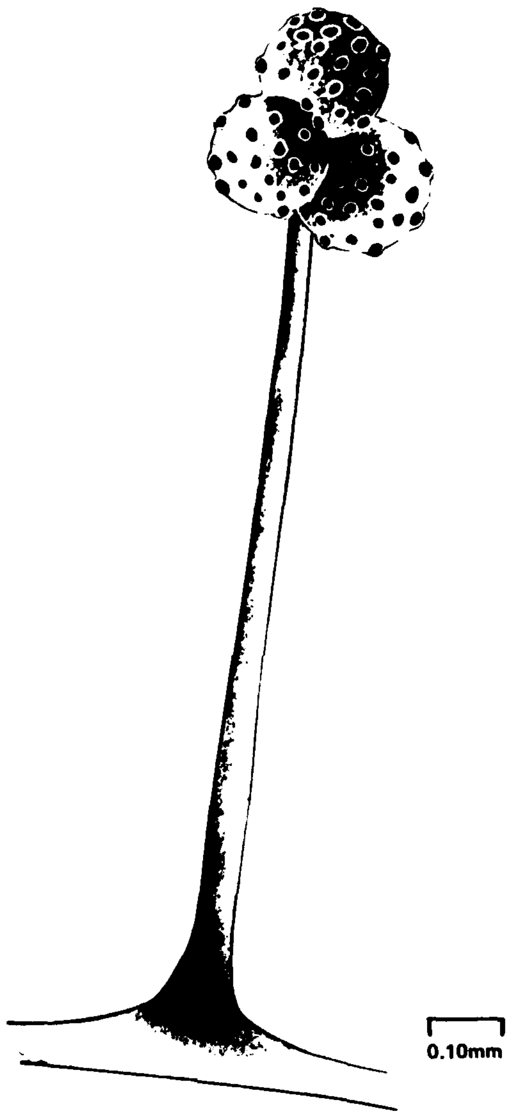


Figure B-1. UNA. White Colony. Conidiophore straight, hyaline, branched at the tip with white vesicles (usually 3) of different sizes. Oval Conidia, hyaline.

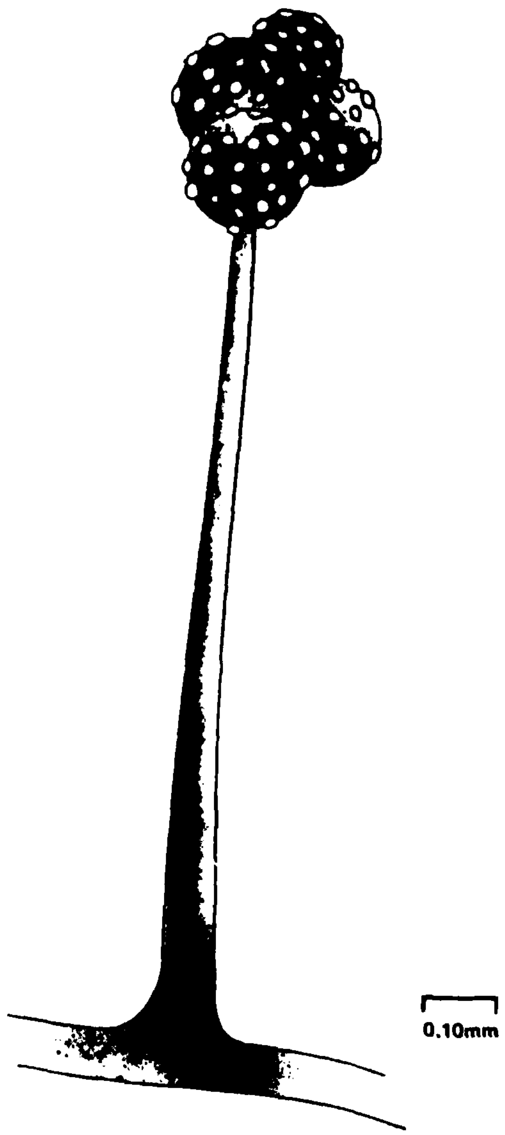


Figure B-2. UNB. Sporangiophores hyaline and erect, ending usually in 4 globose vesicles. Brown, Oval Conidia [similar to (UNA) but with pigmented spores].

Appendix B (cont)

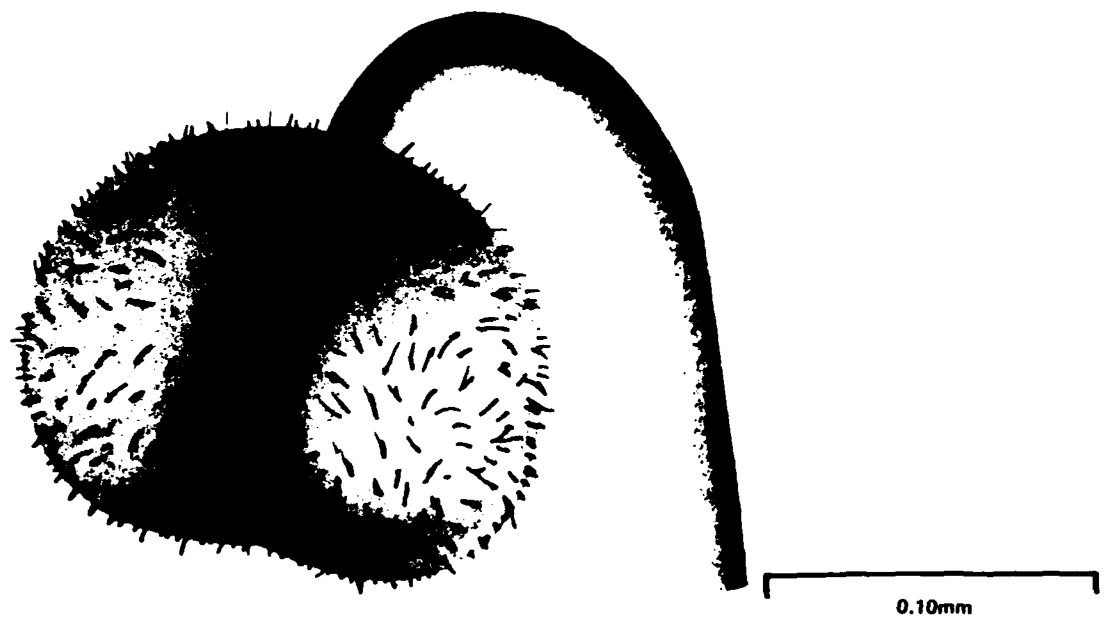


Figure B-3. UNC. Sporangiophore hyaline, single and erect from the mycelium but curved at the end. Dark globose vesicle at the tip. The wall of the vesicle is thick with a closed dehiscence in the center that opens to release the spores. Large oval spores with cuticularized and striated surface.

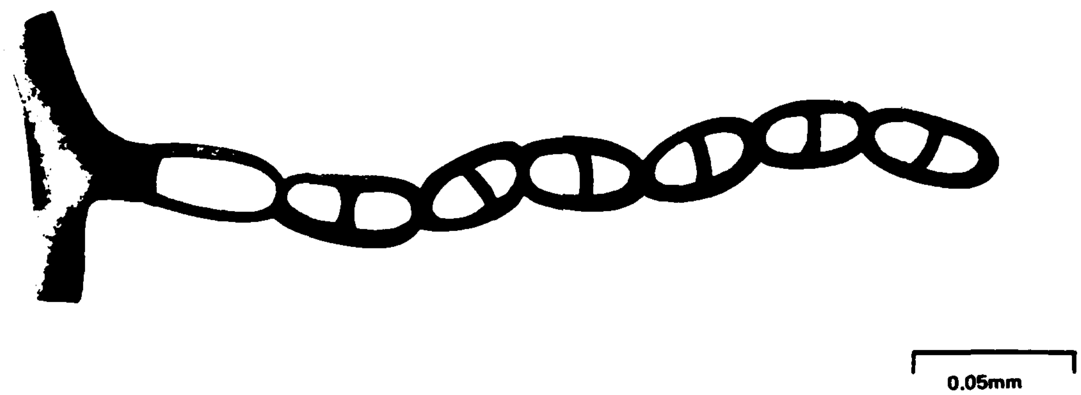


Figure B-4. UND. Conidiophore Inconspicuous. Conidia catenulate in acropetalous chains, cylindrical, hyalin, 2-celled.

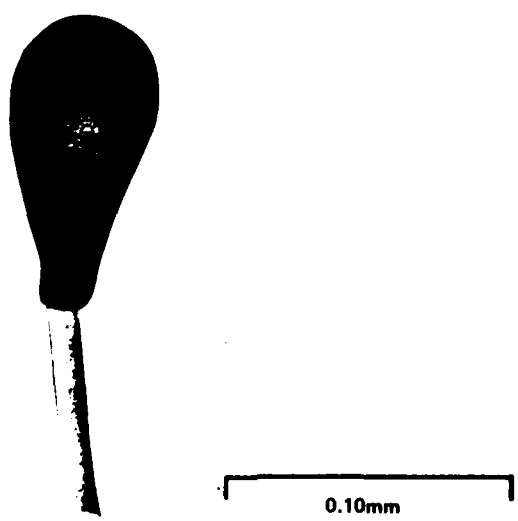


Figure B-5. UNE. Conidiophore short, simple, erect. Conidia dark brown, septate, pyriform with a funnel-shaped base.

Appendix B (cont)

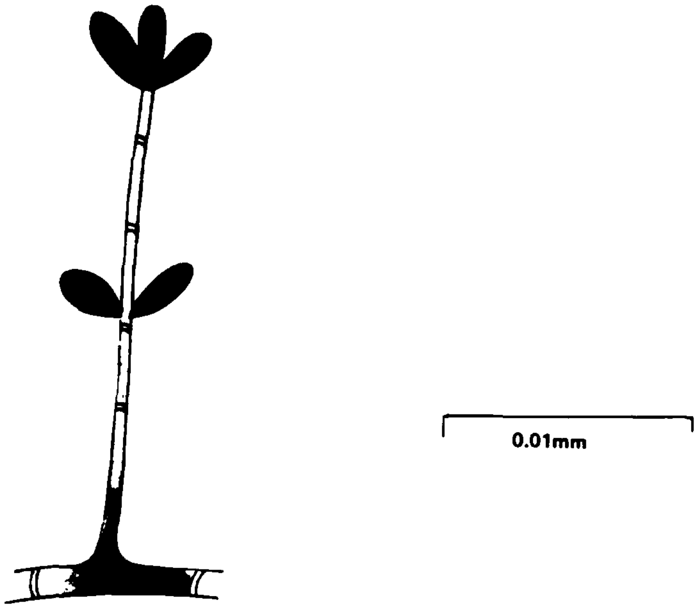


Figure B-6. UNF. Conidiophore erect and unbranched, bearing clusters of conidia on several nodes (verticillated).

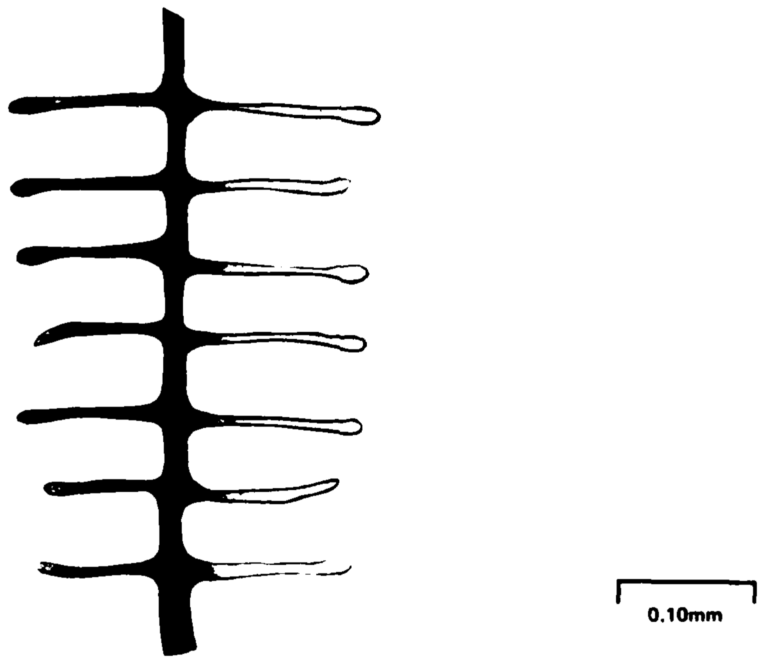


Figure B-7. UNG. Principal Hyphae with erect Conidiophores forming branches on both sides. A single oval conidia on tip of conidiophore. Hyaline colony.

Appendix B (cont)

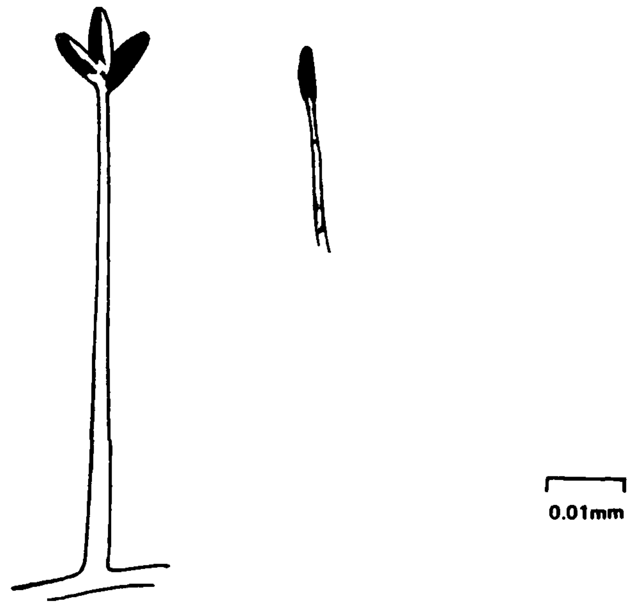


Figure B-8. UNH. Single, long and erect. Conidiophore arising from mycelia, brown colored. Terminal conidia, oblong and borne in heads at the apex of the conidiophore.

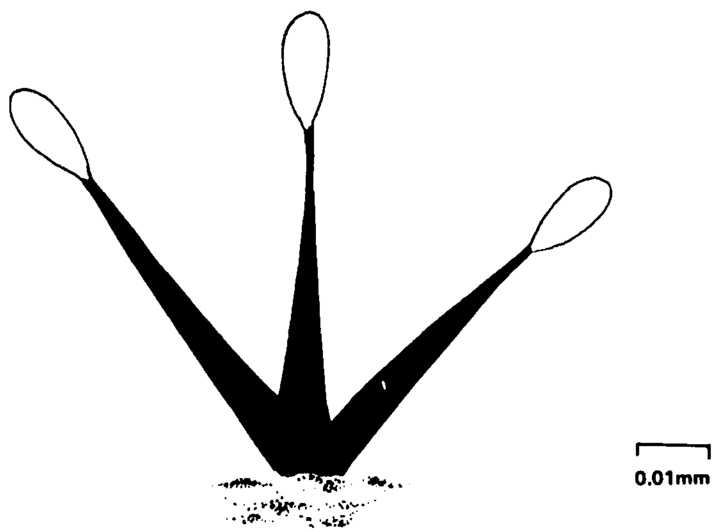


Figure B-9. UNI. Conidiophore arise single or in groups of 3 or more, erect. Conidia ovate, at the apex. All structures hyaline.

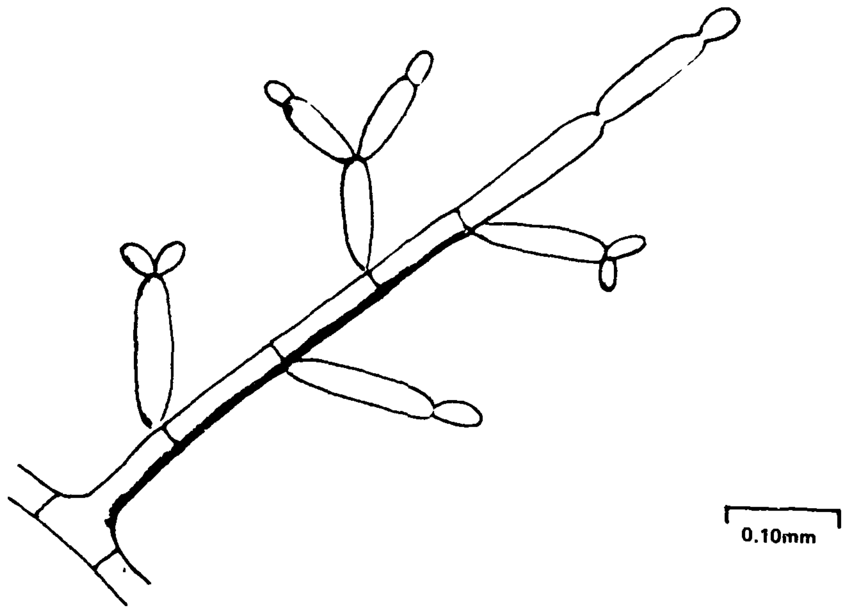


Figure B-10. UNJ. Conidiophore erect, with simple or forked branches occurring on both sides. Carrying 1 or 2 conidia at the tip. Hyaline structures.

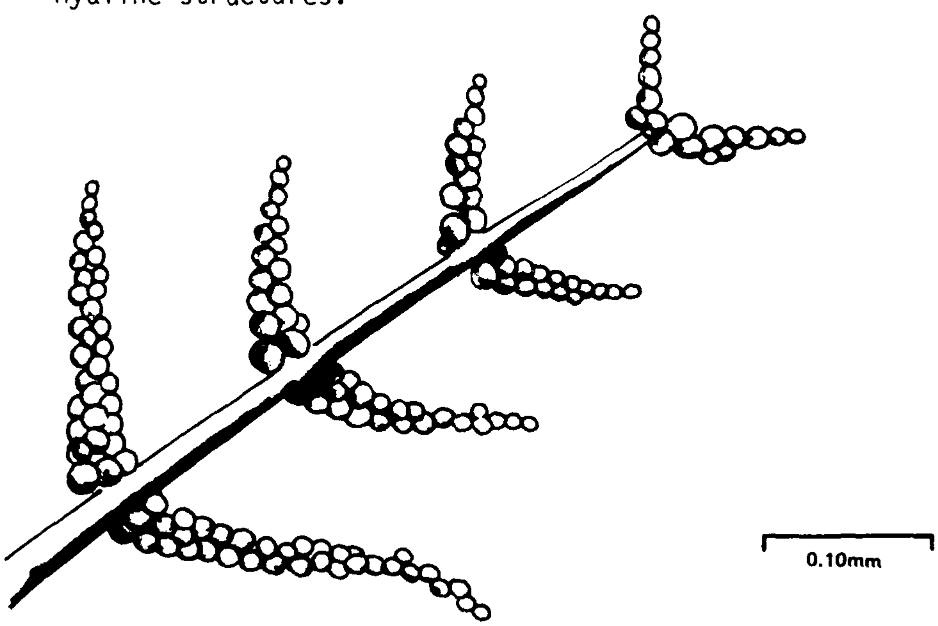


Figure B-11. UNK. Conidiophores occurring as side branches. Conidia borne laterally on the branches, very numerous, small, sessile, globose, hyaline, 1-celled.

Appendix B (cont)

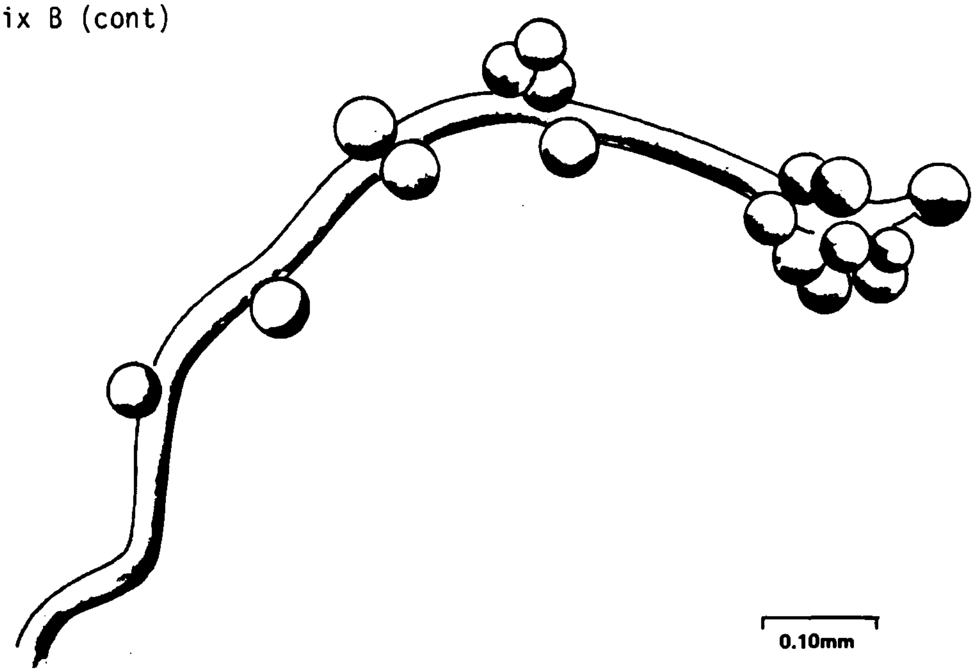


Figure B-12. UNL. Conidiophore long, hyaline, slender and proliferating. Bearing terminally or laterally conidia. Conidia hyaline, globose and 1-celled.

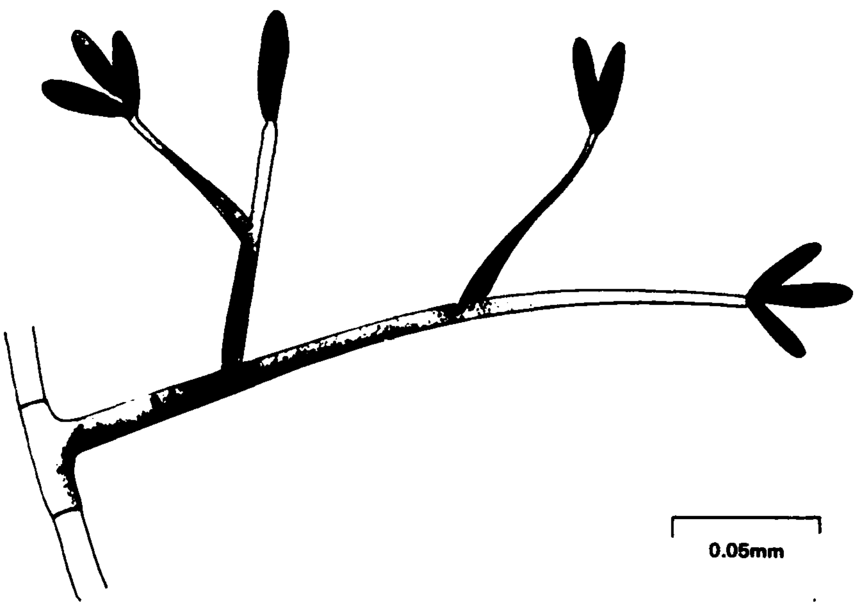


Figure B-13. FUL Fusarium-like Spores. Straight conidia, large, cylindrical, spores has no foot cell.

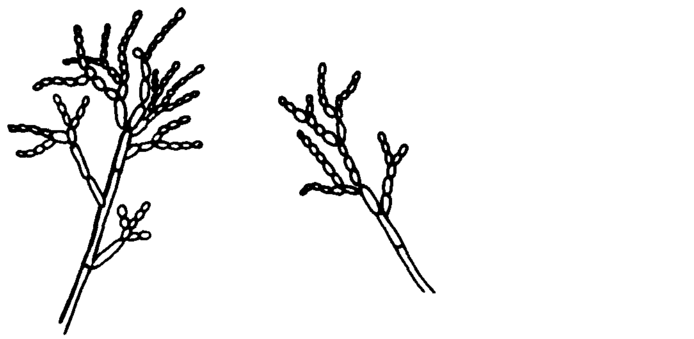


Figure B-14. CLD Cladosporium-like spores. Conidiophores erect, forming a dense turf, olive-green or brown. Conidia ovate in very long chains, fusoid, 1-celled, ten times smaller than common Cladosporium.

APPENDIX C. REFERENCES

1. Rasmussen, R.A., R.S. Hutton, and R.J. Garner. The Interaction of Interface, Diffusophoresis, and Organic Components in a Tropical Atmosphere in Establishing a Microbial Population of Biologically Inert Surfaces. Presented 10 Sep. 68, First International Biodeterioration Symposium, Univ. of Southampton, England.

2. Sprouse, J. F. and 1LT W. F. Lawson III. Ambient Organic Compounds in the Tropics and Their Relationship to Microbial Effects. Canal Zone: US Army Tropic Test Center, TECOM Project No. 9-CO-049-000-002, March 1974.

3. TOP. 8-2-514 "Microbiological Air Sampling in the Tropics." US Army Tropic Test Center, March 1972.

4. Hutton, R.S., E.E. Staffeldt, and O.H. Calderon. "Aerial Spora and Surface Deposition of Microorganisms in a Deciduous Forest in the Canal Zone," Developments In Industrial Microbiology, Vol. 9, Chapter 28., American Institute of Biological Sciences, Washington DC. 1968.

5. Hutton, R.S. "Condensation Nuclei and Particulate Matter," Environmental Data Base for Regional Studies in the Humid Tropics. Semiannual Report Nos. 1 and 2, US Army Tropic Test Center, Tecom Project No. 9-4-0013-001, Report No. AD647823, October 1966, page 112.

6. Gauger, G.W., and R.S. Hutton. "Particulate Matter," Environmental Data Base for Regional Studies in the Humid Tropics. Semiannual Report No.3, U.S. Army Tropic Test Center, TECOM Project No. 9-4-0013-01, Report No. AD 665387, October 1967, page 113.

7. Junge, C.E. "Air Chemistry and Radioactivity," Academic Press, New York, 1963.

8. Sprouse, J. F., M. D. Neptune, and J. C. Bryan. Determination of Optimum Tropic Storage and Exposure Sites. Canal Zone: US Army Tropic Test Center, TECOM Project No. 9-CO-009-000-006, March 1974.

APPENDIX D. DISTRIBUTION LIST

The Nature of Airborne Particulates at Tropic Exposure Sites
TECOM Project No. 7-CO-IL4-TTI-001

Addressee	Final Report
Commander US Army Chemical School ATTN: ATZN-CM-CT Fort McClellan, AL 36205	1
Commander US Army Electronic Proving Ground ATTN: STEEP-CS Fort Huachuca, AZ 85613	1
Director US Army Research and Technology Laboratories Ames Research Center ATTN: DAVDL-D Moffett Field, CA 94035	1
Commander US Army Natick Research and Development Center ATTN: STRNC-Y Natick, MA 01760	1
Commander US Army Combat Systems Test Activity ATTN: STECS Aberdeen Proving Ground, MD 21005	1
Commander/Director US Army Chemical Systems Laboratory ATTN: AMDAR-CL Aberdeen Proving Ground, MD 21010	1
Commander US Army Test and Evaluation Command ATTN: AMSTE-AD-M Aberdeen Proving Ground, MD 21005	1
Commander US Army White Sands Missile Range ATTN: STEWS-SC STEWS-TE-AE White Sands Missile Range, NM 84022	1

Addressee	Final Report
Commander US Army Dugway Proving Ground ATTN: STEDP-SD Dugway, UT 84022	1
Administrator Defense Technical Information Center ATTN: DDA Cameron Station Alexandria, VA 22314	1
Commander US Army Materiel Command ATTN: AMCDRA-ST 5001 Eisenhower Avenue Alexandria, VA 22333	1
Commander & Director US Army Engineer Topographic Laboratories ATTN: ETL-GS-LB Fort Belvoir, VA 22060	1
Director Night Vision and Electro-Optics Laboratories ATTN: DELNV-RM Fort Belvoir, VA 22060	1
Commander US Army Tropic Test Center	
ATTN: STETC-MTD	1
STETC-MTD-P	5
STETC-MTD-T	1
STETC-MTD-A	1
STETC-MTD-O (TIC)	10
STETC-MTD-O (Tech Ed)	2
STETC-LD	1
STETC-MD	1
STETC-ADP	1
STETC-CO	1
STETC-HHC	1
APO Miami 34004	

END

2-81

DTIC